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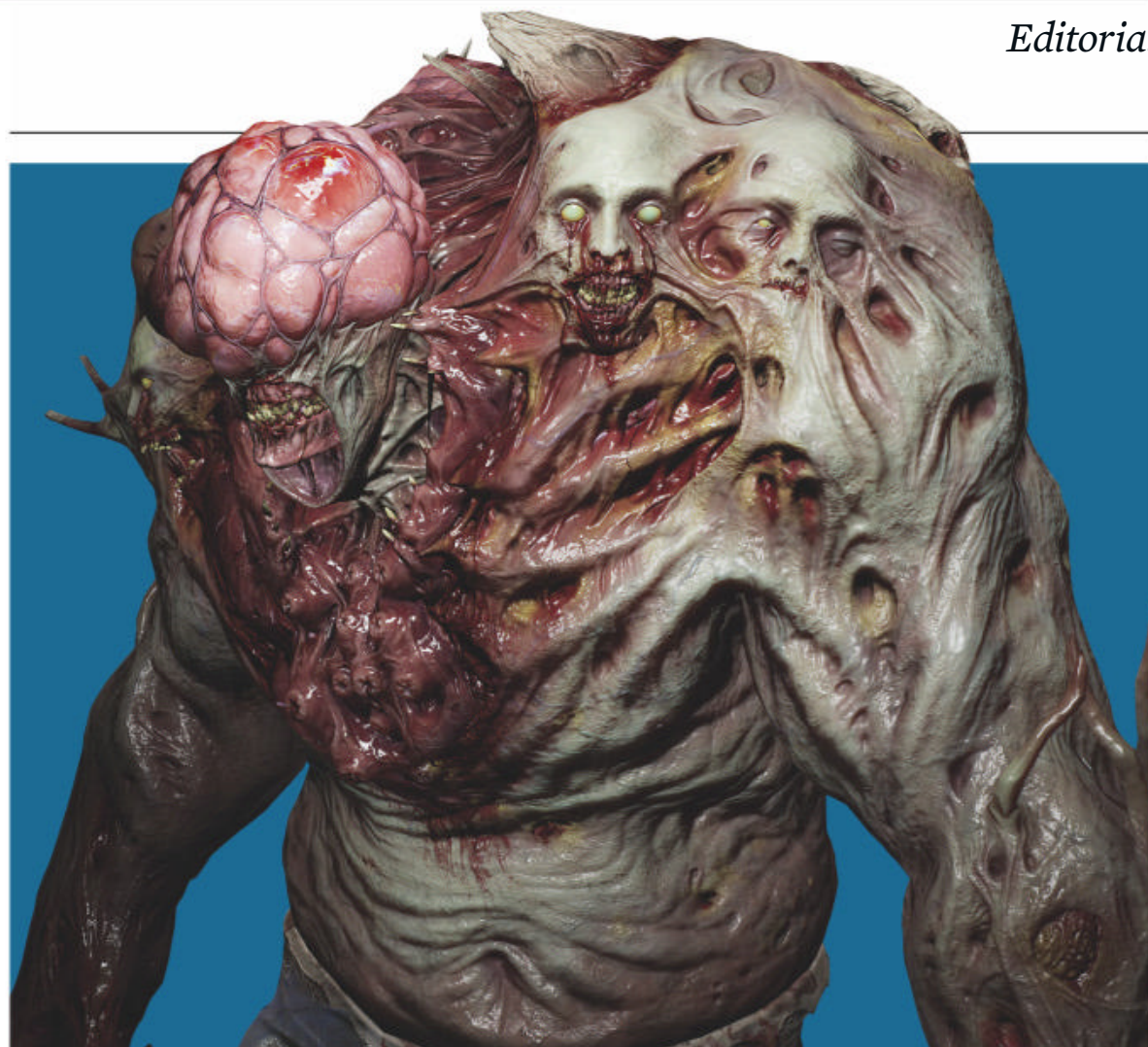
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EVERYTHING'S BETTER WITH FRIENDS...

Even zombies!

After last issue's news of a co-op Warhammer 40K title, it would appear that everything is coming up Milhouse for fans of blowing up evil hordes with friends!

Pretty much right as we went to press, Aliens: Fireteam was announced, and as a diehard fan of everything Colonial Marine (well, except for that last game), I am super hyped for this one. It was too last minute to include in this issue in any real way, but instead we have the very next best thing...

Zombies!

Back4Blood, this issue's cover feature, is looking like a solid spiritual successor to Valve's hit game Left4Dead. Zombies may be starting to get a little tired as the go-to for so many games, but killing them in co-op is always fun. So, I guess that's a lot of gaming – even more than usual – coming up for me. Good thing I've gotten a shiny new gaming chair... which you can read about later in this issue!

David Hollingworth

“Back4Blood is looking like a spiritual successor to Left4Dead.”



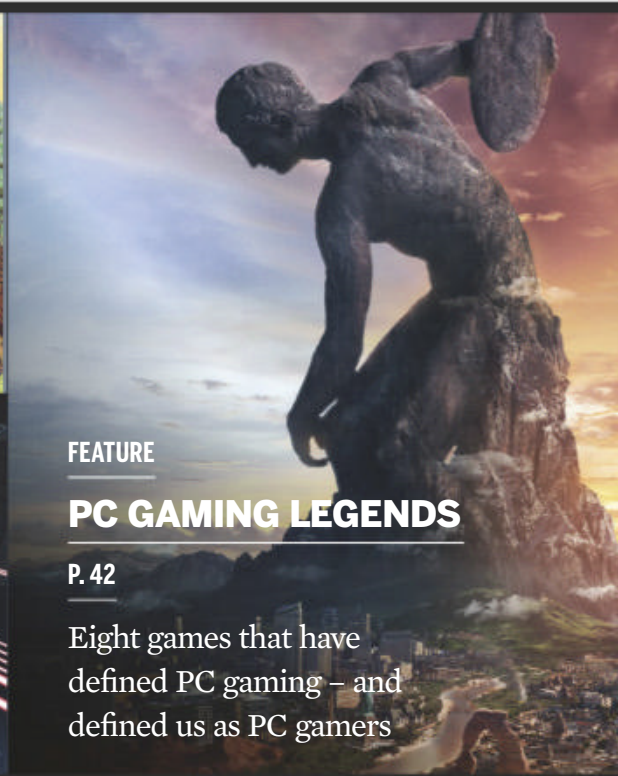
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Is this the new
Left 4 Dead?



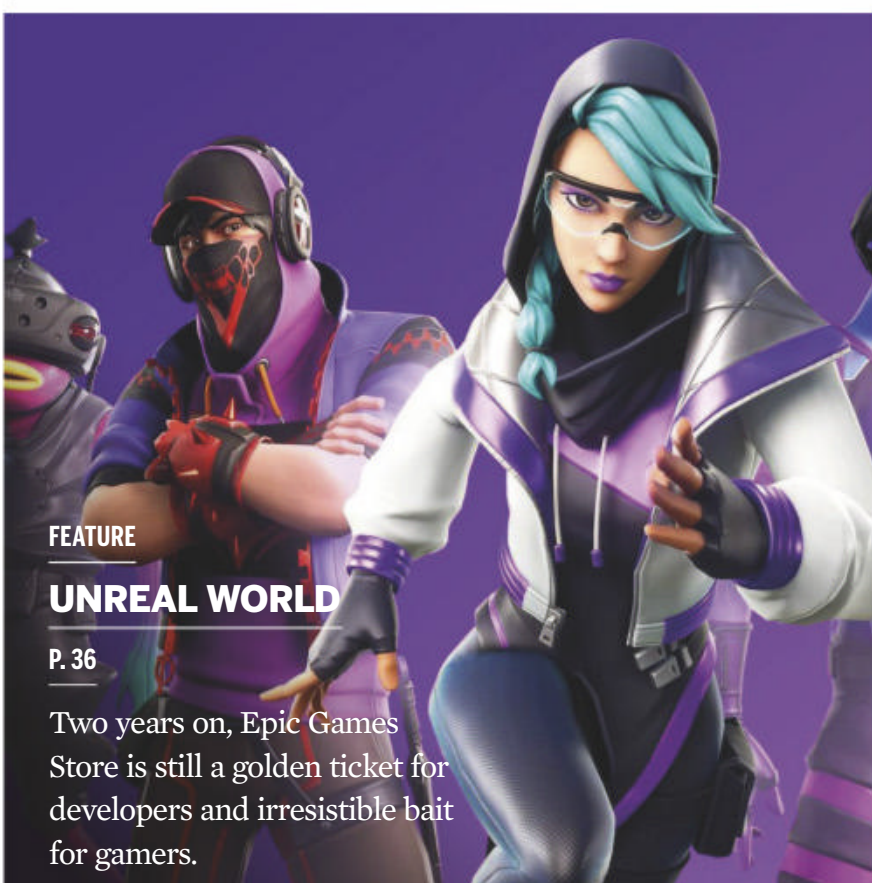


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PC GAMING LEGENDS

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Eight games that have defined PC gaming – and defined us as PC gamers

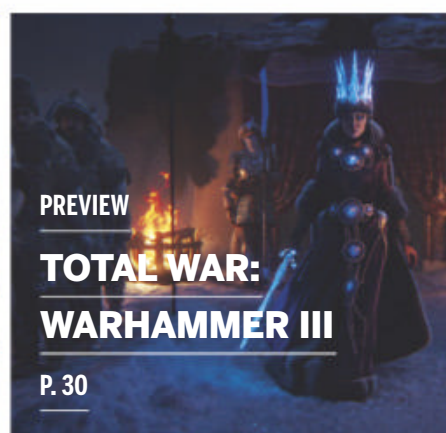


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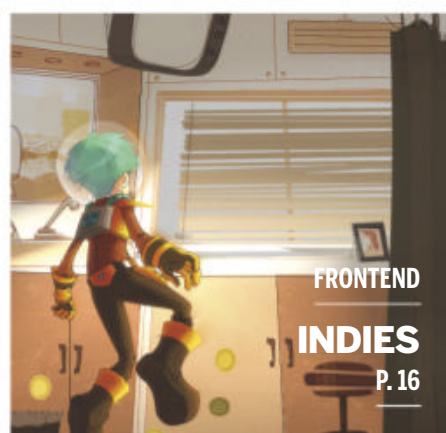
Two years on, Epic Games Store is still a golden ticket for developers and irresistible bait for gamers.



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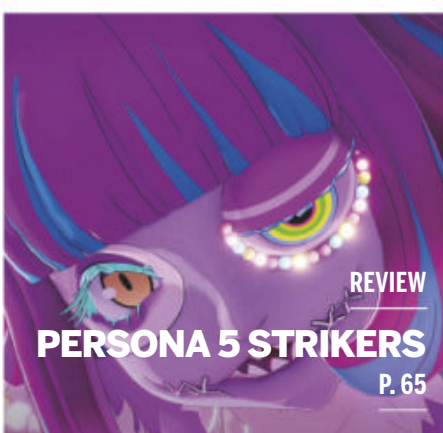
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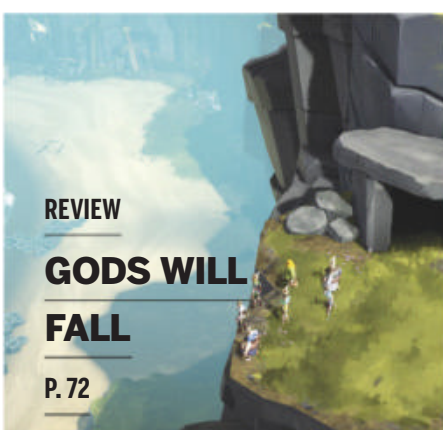
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HERE'S THE STUCK SUEZ CARGO SHIP IN MICROSOFT FLIGHT SIMULATOR

As always, modders deliver.

For a few days now (and probably longer by the time you read this – no, wait, it literally just got freed), a cargo ship by the name of the Ever Given has been stuck in the Suez Canal. It's not really clear how it happened, with several explanations competing pending the results of an official investigation, but the thing that matters is this: It's a giant boat and it's stuck in a vital artery of global trade, threatening the stability of the world economy.

Also, it's become something of a meme....

Naturally, therefore, somebody's put it in Microsoft Flight Simulator. Enterprising YouTube and TikTok poster donut_enforcement has obligingly shared a video of it in action. "What's cool about Microsoft flight sim 2020," said poster donut_enforcement in response to a comment, "is that you are able to add and create things such as modifications."

To clear up any confusion: This is a mod. Microsoft Flight Simulator's world map doesn't update anything like that quickly, though it does render things like weather and air traffic in real-ish time.

Crash Bandicoot 4, a game with no online features, was unplayable when Blizzard's login servers went down

Remember how smooth Diablo 3's launch was? No?

The PC version of Crash Bandicoot 4: It's About Time was released on March 26, exclusively on Battle.net. Though it features local multiplayer there's no online mode, so players were less than thrilled to discover it included always-online DRM, requiring authentication through Blizzard's login servers to play. They were even more unthrilled when those login servers went down yesterday, making Crash Bandicoot 4 unplayable.

Though the servers are back online now, reliance on a constant internet connection remains frustrating for anyone who has to put up with occasional dropouts and instability. Still, at least this will prevent people from pirating it – wait, I'm just receiving a note. Ah, the CrackWatch subreddit reports that a pirated version of Crash Bandicoot 4 has already been released into the wild.

Well, nevertheless.



Anthem director leaves BioWare

"So, today is my last day at BioWare, I'm moving on to do new things," Warner recently tweeted. "BioWare has been home to my grateful heart for nearly 10 years and I want to wish them all the best. DA ME and SWTOR are in good hands and I can't wait to play from this side of the screen."



Hades cleans up at the 2021 BAFTA Games Awards

Supergiant's Hades was the big winner at this year's BAFTA Games Awards, winning not only Best Game but also the awards for Artistic Achievement, Game Design, Narrative, and Performer in a Supporting Role – which went to Logan Cunningham who portrays Hades as well as Achilles, Poseidon, Asterius, the Storyteller, and all those expressive groans of Charon's.

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THIS NEW OPEN-WORLD SURVIVAL GAME PROMISES TO ‘COMPLETELY REDEFINE THE GENRE’

We really don't think it's going to.

Tencent has unveiled a new survival game called Undawn that follows the adventures of a group of survivors in a zombie-filled post-apocalyptic world. But the walking dead aren't the only problem players will face as they struggle to stay alive - or even necessarily the worst.

If you've played video games in the last 15 years, this should sound familiar. Undawn promises PvE and PvP, and along with the usual scavenging and crafting, players can group up to trade resources and build shelters that will help them more easily ride out the end of the world, but conflicts between the non-undead are apparently bound to erupt as well.

"With Undawn, we wanted to create a new type of action game that combines open-world freedom with RPG elements that would completely redefine the genre, regardless of platform," said Rick Li, executive producer at developer Lightspeed & Quantum Studios. "The fact that we created such an amazing experience for mobile and PC platforms means that even more players around the globe will be able to survive the apocalypse together, creating the potential for a huge new type of open world experience."

If you follow mobile games, you may notice that Undawn looks (and sounds) an awful lot like Dawn Awakening, a zombie survival game Tencent announced last year. The game descriptions are virtually identical, Dawn Awakening is (or was) also being developed by Lightspeed & Quantum Studios, and character's from Undawn's Raven Squad are similar or identical to Dawn Awakening character art.

Anyway, they are in fact the same, as Tencent

confirmed in an email that Undawn is the "official name" for the previously mobile-exclusive Dawn Awakening. It's not yet decided whether the addition of PC means that crossplay and/or cross saves are also in the works: Tencent said that crossplay "is something the development team wants to include, but is still under development."

It's also really not clear what sort of "amazing experience" Undawn actually is. A recently-posted Dawn Awakening gameplay video indicates that it's a straightforward third-person shooter that shifts into first-person when looking down the sights, but my lack of fluency prevents me from picking up further details. Descriptively, it sounds a bit like Fallout 76 meets Overkill's The Walking Dead, which isn't the worst idea for a videogame I've ever run across. After watching ten minutes of that video, though, I have very strong doubts that it's going to redefine much of anything.

Zombies are obviously the central peril, but the Undawn website hints at some deeper weirdness. Raven Squad, which includes the trio above, looks fairly straightforward as videogame heroes go, but the Factions are a different story altogether.

Like so much else about the game, it's not clear how the factions are going to fit into the big picture. They appear to be alive, but also give off a distinctly unfriendly look. Why anyone would decide that a zombie apocalypse is the right time to dress up as a Painkiller villain, I do not know, but I'm pretty sure that none of these folks are going to be lining up to help rebuild society as we know it.



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TOO CRUEL FOR SCHOOL

A cyberpunk cult hit has taken the gaming world by surprise, and grabbed our imaginations by the yarbles. Get ready to enter an alien world consisting only of pain...



James Cottee is the colour of a television, tuned to a dead channel. But, you know, colourful.

In a lot of ways, *Cruelty Squad* puts *Cyberpunk 2077* to shame. After seven years of hype, CD Projekt's magnum opus has largely been forgotten. But awareness of *Cruelty Squad* is growing fast, and this sinister sci-fi pustule has all the hallmarks of a sleeper hit.

This first-person shooter resembles a *Deus Ex* clone, where you assume the role of a futuristic assassin who infiltrates megastructures to rub out the enemies of an evil corporation. You can scurry through vents or take the direct approach, and monies earned can be invested in bionic implants that let you leap great distances and make you more resilient to bullets.

But what makes *Cruelty Squad* special is the aesthetic – everything about the interface is deliberately repulsive. Environments are plastered with sickly colours and jarring textures. Menus are sculpted from crudely air-brushed rolls of repellent cyber-flesh. The industrial soundtrack is unsettling in the extreme. And none of this is by accident – it's all orchestrated to form a coherent artistic vision of an amoral future where techno-capital is triumphant.

Cruelty Squad delivers a future so overwhelmingly bleak it makes *Cyberpunk 2077* look quaint. The long-awaited, long-delayed adaptation of Michael Pondsmith's pen-and-paper RPG rests firmly within an outdated, 20th Century paradigm of dystopia – 'What if... corporations were, like, BAD?!' A frightful prospect in 1988, but today this idea is mundane. Consider Activision Blizzard, which recently awarded CEO Bobby Kotick a US\$200 million bonus on top of his US\$30 million salary, while simultaneously closing offices across Europe and laying off hundreds. To add insult to injury for those axed, their redundancy packages included US\$200 gift cards for Battle.net.

The pornographic billboards of *Cyberpunk 2077* hint at a terrifying possibility: 'What if... sex was a commodity?!' Another question asked and answered by our tawdry 21st Century experience. *Cruelty Squad* asks: 'What if... chunks of human flesh were a commodity you could trade on the stock market to buy grotesque bio-mechanical upgrades, like an external intestine you can use as a grappling hook?' This is a much more interesting question, and in answering it *Cruelty Squad* delivers more dynamic means of environmental traversal than your run-of-the-mill AAA shooter.

The fellow who made *Cruelty Squad* clearly spends a lot of time online, as the myriad NPCs you meet satirise an array of sub-cultures who believe that technology will grant them relief from the oppression of their existence. One character thinks that an Urbit-like operating system will let him escape censorship, while another thinks that crypto-currency will let him escape poverty. The most pathetic character you meet lives in a mansion surrounded by walls of Funko Pops. He boasts that he's spent over \$100,000 on them. He refers to them as his children. But they're nothing but dead plastic, and shortly after meeting you he's nothing but dead meat.

Cruelty Squad makes a mockery of humanity, and it makes a mockery of you for playing it. Even the reload mechanic is deliberately aggravating, for you have to hold down RMB and rapidly move your mouse downwards – no mean feat in the heat of battle. Beyond the oblique interface there's a lot of hidden content, like a high-difficulty setting that can only be unlocked in 640x480 mode.

It has the anti-art vibe of *Pencil Whipped*, the inhumanity of *Hotline Miami*, and the eye-piercing colours of all those strange mini-games made by The Catamites. I'm not sure if I can recommend *Cruelty Squad* at full price, but I can certainly recommend you play it – it delivers a unique experience. Once you've seen it, you can't un-see it.

In a real sense, it also represents the future of gaming. The big studios just can't make games any more complex; they're breaking under their own weight. They'll be patching the bugs out of *Cyberpunk 2077* for years. But for a lean, efficient product like *Cruelty Squad*, each patch simply adds more features. Like grotesque new gibs, or a fishing mode. Or the ability to trade in shares of GameStop (well, a parody thereof).

The truth is, we're a civilisation in decline. The US Air Force has forgotten how to maintain its B-2 stealth bombers, and the day will come when Activision forgets how to make *Call of Duty*. But auteurs will endure, emerging one by one from the swamp of the avant-garde to remind us that life is cruel, and that artists are crueler.



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AN AGREED UPON FABLE

When players write history, games have to be organised thoughtfully.

This month, I got thoroughly obsessed with *The Curious Expedition 2*. After finishing my two page review, which you will find in *A Collection Aside*, I started reading what other reviewers thought of it. On average, I was more positive than many. Almost all mentioned the uncomfortable colonial context, although interpretations varied. *Rock Paper Shotgun* referred to it as a “machine for making rip-roaring adventure stories” which makes sense to me. And, many reviewers compared it to *The Oregon Trail*, which I had heard of, but never played.

And so, I played *The Oregon Trail*. It was awesome. I decided to be a banker from Boston because the carpenter from Ohio and the farmer from Illinois sounded poor. I bought significantly more than the recommended amounts of food, clothing and spare parts in Independence, Missouri, listened to some townsfolk discussing weather conditions and set off in March. I had money left over to pay people to help me cross rivers. I could buy increasingly more expensive food at forts. I reached Willamette Valley with three dollars to spare.

My entire family was alive, too, which (I believe) is because I kept food rations high the entire time and rested when they were ill. Again, the abundance of food was all thanks to starting with sixteen hundred dollars, rather than eight or four. Would I like to try with one of the other characters? No, I would not. I played the hunting minigame once, shot one squirrel worth three pounds of meat, and decided it wasn’t for me. My final score wasn’t incredibly high, but I survived what was, nonetheless, a very tense experience, despite my rich start.

I appreciated the gory, incidental stories people told along the way, about whole families starving to death, drowning and so on. Those unfortunate were clearly a lot poorer than me. I was reading, in a *Vox* article, “9 myths you learned from *Oregon Trail*”, that people who couldn’t afford a durable wagon often failed to complete the journey and that poor families would have been unlikely to consider it in the first place. In a game, death is fun. In reality, estimates suggest between nine and twenty-one thousand people didn’t survive the trail. That’s amazingly

sad. (Not to mention the impact on indigenous people and their environment, too.)

The overpowered banker is interesting because (intentionally or otherwise) he’s a nod to the obvious privilege required for any endeavour to have worked out well in nineteenth century America. The 1985 version of *The Oregon Trail* (that I played) isn’t overly culturally sensitive. Yet, I’m interested in how these kinds of historical game contexts are structured around player agency. I’ve read criticisms of Sid Meier’s *Colonization* which mention everything from a potentially exploitative use of “natives”, to the lack of a slave trade, both problematic in different ways.

In a “fictional” context, like *The Curious Expedition 2*, I’m confused by why all of the “natives” have darker skin, or are animals. Offensive? Probably. Perhaps the point is to highlight the “scientific racism” prevalent in nineteenth century Europe but, even if so, is that a context that is properly “fun”, even if the game is otherwise “fun”? I made the mistake of playing Australia in *Civilization VI* on an Earth map, a while back. I soon realised who the “barbarians” were on my starting content and that there was no role for them, except to be obliterated.

Games like *The Oregon Trail* (which was first made for a Year 8 class in 1971), *Colonization* and *Sierra’s Gold Rush* present uniquely engaging versions (however questionable) of history. As a modern offering, *CE2* does so too, in its own (perhaps not entirely better) way. When musing whether there was ever an Australian equivalent, a friend mentioned *Crossing the (Blue) Mountains* (presumably as *Blaxland*, *Lawson* and *Wentworth*). I attempted to source a copy but was told the programmers have retired and the software is no longer distributed.

Having grown up in *Blaxland*, and still not knowing any real history of the area, I’m dubious about whether an old game could have told that story well. I’m unsure about whether it could be told well now. Obviously, the question is, who should tell these stories? I’m reminded of *Path Out*, by Syrian refugee Abdullah Karam. And Meena Shamaly’s GCAP talk titled, “Cultural Integrity and Indigenous Collaboration on the Innchanted Soundtrack”. Imagine an Australian, historical game that was poignant and real. Perhaps there will be more ways to support this kind of collaborative development in future.



Meghann O'Neill, after finishing this column, found a game called *When Rivers Were Trails* (2019) which is described as “*The Oregon Trail* meets *Where the Water Tastes Like Wine*”. It looks amazing and may be a suitable follow-up, next issue.

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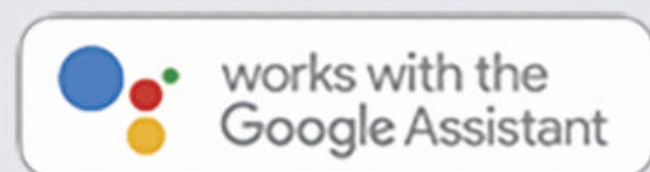
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Special Report

PCPP INVESTIGATES



Just look at this place. No wonder *Hitman 2* was so big!

DECEPTIVELY SMALL

How **HITMAN 3**'s developers cut the trilogy's install size in half

Hitman 3 is an enormous PC game – at least if you own *Hitman 1* and *2*, which *Hitman 3* can import to bring the entire trilogy into a single package. That sounds like a recipe for an install size big enough to make an SSD cry, because *Hitman 2*, with the first game's levels imported, is currently 149 gigabytes. *Hitman 2* is one of the mightiest storage hogs on PC, second only to *Call of Duty*. But *Hitman 3* will actually shrink instead of grow, retroactively optimising the first two *Hitman* games into a dramatically smaller package. How did IO Interactive manage to halve the install size? We asked the developer to break down the technology and techniques it used to cut 80 gigabytes out of the trilogy.

“With all content installed, including the locations from *Hitman 1* and *Hitman 2*, we're expecting *Hitman 3* to clock in at approximately 60-70 GB and we're really happy with that,” IO Interactive's chief technology officer Maurizio De Pascale says.

Even without the older games bundled in, *Hitman 3* is a leaner install than IO has managed to pull off with its last two games. As De Pascale explains to me, the answer is simple: more compression. But why *Hitman 3*'s compression is so effective, and why they didn't use the

same techniques last time, is where it gets more complicated (and more interesting).

Hitman 3 uses a technique called LZ4 compression that's been around for about a decade. Almost everything in the game runs through this compression algorithm, which is especially efficient. Here's how De Pascale explains it, “Almost all lossless compression techniques exploit the fact that data often has repeating sequences. For example, ‘HITMAN’ or ‘IO Interactive’ will likely appear frequently in an article about IOI.

“Those duplicated sequences don't need to be stored multiple times and can be omitted, as long as you embed some information in the compressed stream about where they appeared originally, so that you can still perfectly reconstruct the initial data. The super simplified description of LZ4 is that it replaces those lengthy sequences with a reference to a sequence that has previously appeared in the decompressed stream.

“So instead of storing the word ‘compression’ as-is, the algorithm can store the equivalent of ‘the word that appeared X words ago’, which can be very efficiently encoded with few bits. Of course that's not exactly how it works, but it's sufficiently close to convey the idea.

“This is actually a pretty common technique, which other compressors employ as well, but LZ4 has a very performant implementation that provides a good trade-off



Mega textures

4K textures are one reason for today's huge file sizes. Some PC gamers worry that games will soon demand more VRAM than their graphics cards can meet, but brand new PCIe 4.0 SSDs (like the Samsung 980 Pro, and the PS5's) are so fast, they can potentially stream far more data near-instantly, drastically reducing what needs to be stored in video memory. Neat!



FAR LEFT: First stop for Agent 47 in *Hitman 3*: the tailor, obviously.

LEFT: I assume this is the vault where IO keeps all its fanciest compression tech.

SPACE HOGS *The biggest games on PC as of early 2021*

COD: MODERN WARFARE

Call of Duty: Warzone is a heavy 70GB alone, but tack on *Modern Warfare* and it's over 200 gigs.

HITMAN 2

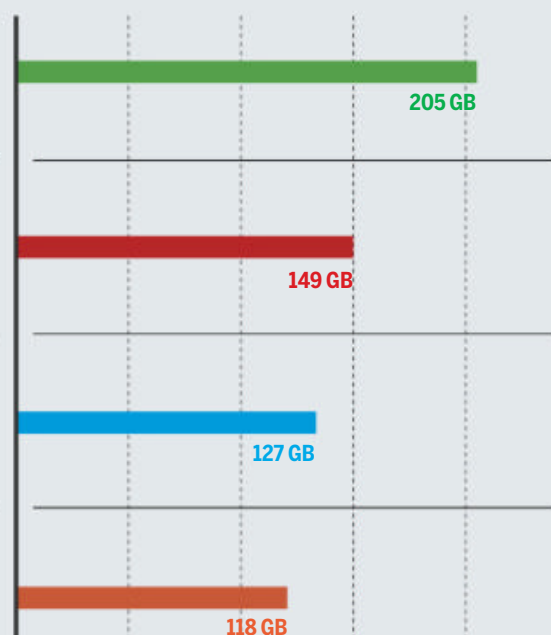
Agent 47's previous outing is one bloated hog with its DLC and the *Hitman 1* levels installed.

MICROSOFT FLIGHT SIMULATOR

How'd they fit the whole Earth in a package smaller than *Call of Duty*?

RED DEAD REDEMPTION 2

Talk about Big Country! No, not the band from the '80s...



between reasonable disk compression and great decompression speed, which makes it a common choice for videogames.”

COMPRESS GANG

With *Hitman 1* and 2, IO didn't apply compression as broadly “to avoid performance issues on low-spec hardware”. The game only has so much CPU power to work with, so decompressing data has to be weighed against everything else it's doing, like running the AI and processing inputs. The trade-off is to skip compressing some files, resulting in a larger install but better performing game. By *Hitman 3*, engine improvements have lightened the load in other areas, freeing up more processing cycles to spend on compression.

Another big improvement comes from how IO is importing the data from *Hitman 1*. Because the game was built episodically, every episode had to have all the code and assets needed to work standalone. “In *Hitman 3*, we're handling the way we give access to the legacy titles in a different way, which makes it easier for us to

aggressively de-duplicate these shared resources,” De Pascale says.

SSDs are also faster at sequential reads than random ones, but because they don't rely on moving parts, the performance hit is nowhere near as severe as it is on a hard drive. Games designed purely for SSDs today don't

have to employ those tricks. But IO Interactive has developed all three *Hitman* games to run on consoles, too, and the PS4 and Xbox One use 5400 RPM hard drives made a full decade ago (with measly 8MB caches, to boot). De Pascale says that IO Interactive still uses technology that the studio built for when its games were loading directly from DVDs, which are even slower than hard drives.

Now that the PlayStation 5 and Xbox Series X are here with next-gen SSDs, that technology is hopefully soon to be obsolete, and any game developers who still duplicate resources for faster load times can follow IO's lead in slimming down their games. Will *Call of Duty: Warzone* manage to shave off some dead weight in 2021? Even if it does, it's going to be hard to upstage *Hitman 3*'s 80 gigabyte diet. Agent 47's definitely going to need a new tux. ■

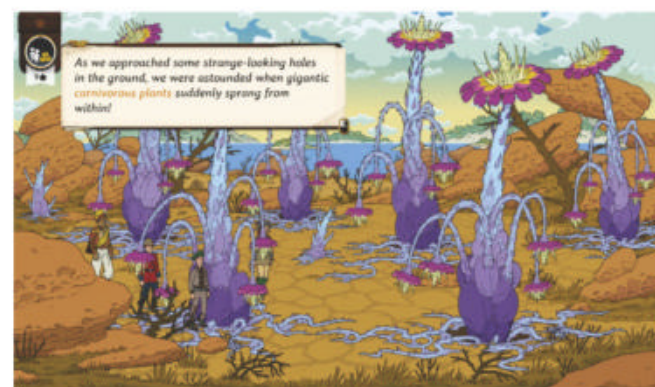
Wes Fenlon

EVERY EPISODE HAD TO HAVE ALL THE CODE AND ASSETS NEEDED TO WORK STANDALONE

A COLLECTION ASIDE

After discovering PowerQuest, Dave Lloyd's collection of Unity prefabs for making point and click adventures, MEGHANN O'NEILL created an adventure game for Global Game Jam. It's small, but complete, and you can find it on itch.io with the title, *The Kid Who Stole Christmas*. She isn't absolutely fixated on adventure games this issue, but she has reviewed two, with a

fresh eye. It's also interesting to note that all of these games sell for the same price; \$28.95, because they're all quite different in structure, scope and in terms of production. If indie game prices are on the way up, that's pleasing, but we're also committed to bringing you the information you need to be able to decide if something is for you.



THE CURIOUS EXPEDITION 2

DEVELOPER Maschinen-Mensch PRICE \$28.95 AVAILABILITY Released

WEBSITE <https://curious-expedition.com/>

Ilove games that feel unfair. Not games that are actually unfair, just those that appear to be murdering you arbitrarily for the longest time, before they ultimately prove that your poor decision making did, in fact, justify failure. Although I've improved at *The Curious Expedition 2*, over many hours of play, there are still moments that leave me scowling. I feel like I "should" be more successful. It's surprisingly compelling. When an outcome can't be completely controlled, and the stakes are high, things get exciting.

Luck (in the form of an insanity event) can mean the difference between finding mangoes and Jules Verne eating your love interest. It's possible you should have brought tea, which makes the initial cost of pathfinding saner, but grappling hooks to preserve your sanity on hilly terrain may have been of genuine importance, too. You could have asked 'natives' for food instead of the location of their village, which was too far away to sanely reach. If you're on the hardest difficulty, even the wrong choice between walking left or right makes madness inevitable.

You're a colonial explorer embarking on expeditions the word "curious" would only describe if you had no regard for your companions, the environment, native people and sacred treasures/monuments. It's possible to play as "benevolent" but it's much easier to play as "oblivious". This game is (likely) a complex political statement that I'm not sure I entirely understand, except that winning often feels like another unfairness. Do I really deserve a parade after trading just a few marbles for the natives' precious ceremonial treasures?

The campaign is organised so that you can choose from missions, located in unlockable biomes, before you're forced through another

story level. You can be sponsored by one of three factions, one snooty, one steampunk, one mystical, who will provision your expedition. I prefer Lux Labs, because of their magnificent exploding batteries, but it's possible to approach gameplay in a myriad of ways. Explosions are useful in combat, but only if your companions can roll blue and you don't want to bother with stealth and a shroud of animal scent.

In fact, every decision requires you to understand its interconnected implications. Combat can be useful as a source of meat, for example. If you eat dead creatures raw, you'll remain slightly saner, but travelling with a cook can dramatically improve upon these results. Of course, natives will get progressively angrier the more wildlife you kill (including if the animal stalked you as prey) and so you can forget about resting in their village. If you travel with a hound, however, they can hunt (the less conspicuous) quail every several days.

One character, the Travelling Quack, is a great example of this double-edged sword idea. Sometimes, they will make a potion that heals, but it tastes so bad, the recipient will lose a point of loyalty. An infected wound will always lead to death, but a curative potion usually causes some kind of persistent, paranoid quality. Not so bad? A pyromaniac can "accidentally" incinerate the entire group, if you're slow to move. And poor loyalty has some especially dire consequences, including companions stealing away with all of your stolen treasures.

Whether or not this game feels fair is related to two key concepts; insight and luck. Firstly, you don't know what you don't know, until you know it. The first time you go insane, you could just have a weird dream in the purple fog (that gradually strangles the island, to prevent dilly dallying). But it's not until you experience a more serious consequence that the real danger of insanity is revealed. Is cannibalism, for example, caused by a failing statistic, like low loyalty?



If so, the game does a great job of obfuscating it, because I have no idea.

Luckily, you can play on the hardest difficulty and still choose whether permadeath will wipe the whole run, or just the current mission, as you learn. When I was playing on the easiest, I thought that the levels were procedurally generated. It was only after dying several times on the hardest that I realised that (possibly) handcrafted levels seem to persist for a few attempts in a row, then change. This creates a kind of beneficial unfairness because, if you know that the question mark to the left is not an oasis, you can make trails in a more useful direction.

Probably the most interesting difference between the easiest and hardest difficulties is that the maps diverge radically, in size. Longer journeys make you more insane. I believe roving predators are also more dangerous, both because of party size and higher hitpoints, but I was trying to avoid them, so I can't be sure. Combat is much easier to understand, compared with the original Curious Expedition, although instruction provided remains sparse. You'll need to prepare, experiment and pay attention, three of my favourite things.

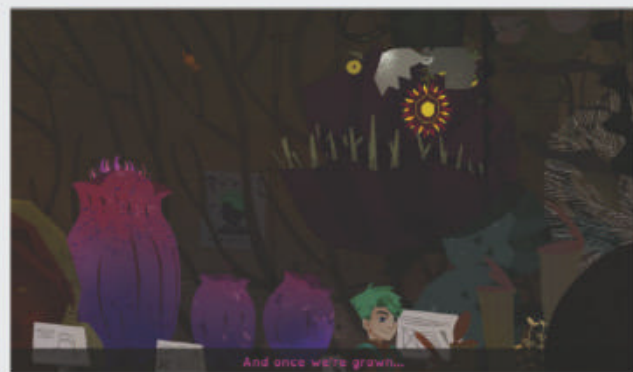
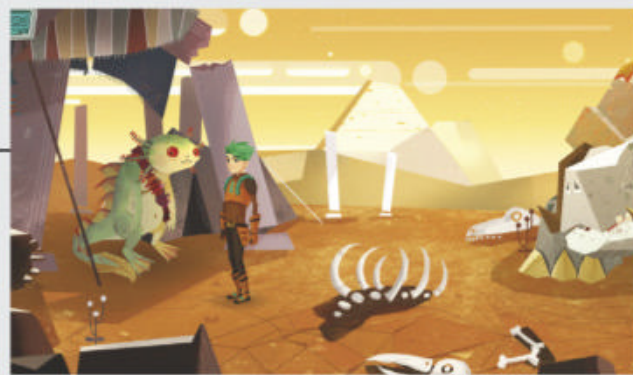
Each companion has two dice. They'll have unique abilities on a couple of faces, like Jules Verne's desire to write notes about the attacking creature, for fame. You'll win or buy weapons and other equippable items, which will transform faces from (perhaps) Weak

Punch into something more powerful that may stun or cause bleeding. When a companion is bleeding, using an affected die causes them damage, too. Each die will also have blank faces which you can reroll once, although this may be unwise if this causes a quick adversary to be given an extra hit.

Things get more complex when you realise that each face of the die, or consumable item, has slots for boosts of the same colour. So, you can roll a red Heal and heal more hitpoints by adding any other red face, even if it's an attack or something unrelated. Alternatively, you could use the red Attack and boost the hitpoints damaged with the red Heal. And potions are dice that have six (blank) faces of one colour, exclusively used for boosting. I loved this combat system. You can hedge your bets, but the spectre of bad luck always looms large.

I was playing Risk with the kids recently. They were horrified by those moments when the odds were in their favour; having more dice and soldiers, yet they rolled badly. An entire war can hinge on someone getting a couple of sixes. At one point, with his confidence thoroughly undermined by a run of bad luck, my younger son ate a plastic soldier instead of the potato chip he was holding in his other hand. If there is a more apt metaphor for The Curious Expedition 2, I don't know it. It's hilarious, unexpected and both more and less unfair than you'd like it to be.





HENRY MOSSE AND THE WORMHOLE CONSPIRACY

DEVELOPER Bad Goat Studios PRICE \$28.95 AVAILABILITY Released WEBSITE <https://www.mosseadventure.com/>

I love adventure games and I love playing them with my kids. My kids are somewhat less keen, however, especially as they get older. Lyndon was eight when we played *Thimbleweed Park* and it was Ransome's beeped out swearing that kept him engaged. I play adventures regardless but, given *Henry Mosse and the Wormhole Conspiracy* is about going on a galactic journey with your mum, I thought it might be worth trying to get Lyndon back on board. There were lots of laughs, some cheerful eye rolling and a surprising number of "stuck" moments.

Henry, although an older teenager, is incredibly naive, surely the consequence of futuristic helicopter parenting. For an adventure game protagonist, this works well because it means he can be endlessly curious and shocked by the events unfolding around him. In fact, he's hardly explored the cosmos at all, despite the Mosse Family running a delivery service through space. The gig is not without its mundanity, like business dealings and paperwork, but mysterious deeds are afoot and things are about to take a darker turn.

The puzzles are unusually challenging and highly varied. One moment, which involves approaching a fractious turtle, is simple, yet elegant, and I can't recall coming across this idea before. A couple of times, I was foiled by the art and didn't notice steps or a walkway to a new area, which was frustrating. I also dislike solving puzzles "accidentally", where I'm not sure what I'm trying to achieve, like clicking something on something and it works unexpectedly. The prime culprit for this was an incredibly

confusing moment involving flowers, bees and the sun.

Oddly, there appears to be a dialogue option that skips the flower puzzle altogether, as if designers realised it was too difficult, but only at the last minute. Similarly, despite incredible voice acting, I only found a button to skip dialogue (surely mandatory for the genre) near the end. And, although the musical composition, a neat mix of cinematic, orchestral timbres and electronic sounds, is lovely, many of the earlier loops feature highly structured melodic content that seems particularly repetitious (and grating) when you're stuck.

I wonder if this game would be a better movie (or comic), or if it had been planned for a different medium initially. So far as I can tell, *Henry Mosse* is the debut title for Bad Goat Studios. It is unusual that such attention has been paid to aesthetic elements, including story, characters and dialogue, while some of my basic expectations for genre remain unmet. It ended with the suggestion of more chapters to come. I hope the studio has the chance to make a *Henry Mosse* series, which I imagine could become tighter and more refined, over time.

I particularly like that there appear to be multiple ways to solve puzzles and that this leads to divergent, resultant solutions later, even if this is not always clearly communicated to players. Lyndon's favourite character was an alien who talks in a frightening, unintelligible hiss and ends every sentence with "beep". It's possible he thought the alien was swearing but, either way, he remained interested to the very end. This is an enjoyable experience. I am interested to see what kind of innocent trouble Henry gets himself into next.

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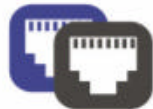
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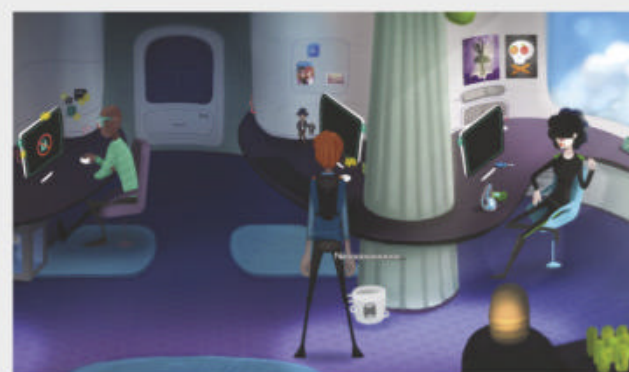
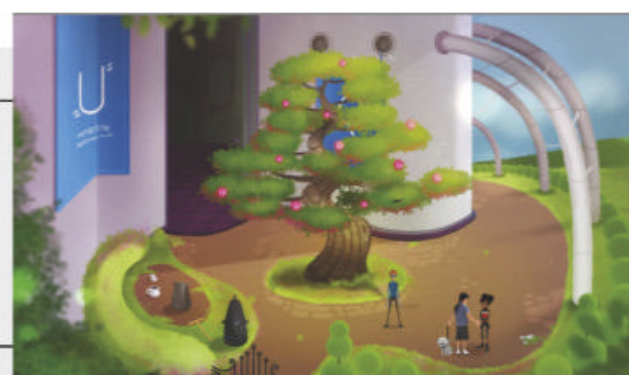
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MUTROPOLIS

DEVELOPER Pirita Studio PRICE \$28.95 AVAILABILITY Released

WEBSITE <https://www.piritastudio.com/>

I've played so many games. So many. Recently, I've noticed myself becoming fixated on single details and ignoring the wider experience, which I'm sure is related to the fact that so little surprises me these days. *Mutropolis* is another adventure game, but it's set 3000 years into the future. That's an amazing concept. Or, it should be. Granted, there's a futuristic garden in which you can instantly alter the season, just for fun. But why is Carlata dressed exactly like a woman I saw on the train this morning (in 2021)? Her accent also perfectly matches my cousin's.

Surely we have evolved out of high heels by 5000AD. Haven't we? What a dark future. In fact, post-cataclysm, humanity survives on Mars. The game is set back on Earth, centering around a company of archeologists who hilariously misunderstand historical figures and everyday items. One book describes roses as, "projectile weapons to defend against opera singers." When the protagonist doesn't know what a pyramid is, it is explained to him as being "one of those pointy things in the desert". The story then widens to encompass 9000 years instead of a mere 3000.

I became fascinated with how puzzles are framed over this great span of time, too. For example, Henry doesn't know what a plug is, but several solutions involve electricity. And the player has to know how to create a battery from improvised materials. At one point, a futuristic archeologist and an ancient god are confronted with written English. One says they can read it, but they're telling lies only the player can discern. And yet, the characters are speaking English the entire time. The casual disregard for these dissonances and plot holes is extremely

endearing, somehow.

It's also amusing that the player and protagonist remain distant. Henry's reluctance to put his hand into dark holes causes absolute hilarity. Yet, his enthusiasm for archaeology (no matter how badly he misunderstands the correct orientation of a bicycle) is infectious. The humour sustained my interest across a gratuitously large collection of puzzles. Even in gated scenes, there are a myriad of items, conversations and visual clues at play. When the game opens into two very large areas, matters become incredibly complex. I found a lot of the puzzles difficult.

I couldn't decide whether I was trying to solve puzzles as myself, or as a 51st Century man, even if he's (at heart) a simple historian who still prizes his trowel above all else. I like how Henry often expresses surprise at what I'd consider a logical solution (as a 21st Century player of adventure games). There are less examples of the opposite approach, in which Henry solves puzzles in a way I struggle to understand, and this could have been fun for designers to explore in more detail. But, yes, making things hot and cold is weird in the future.

Mutropolis is an adventure game. It's funny, massive, beautiful and polished, especially in terms of animations and the occasional, wonderful moment for dynamic music. Perhaps, unlike me, you won't fixate on what the future might be like 3000 years from now and whether people will still wear dresses, dye their hair purple or have hair at all. Why are they growing apples while roses don't exist? Oddly these questions made the game even more compelling in my mind. It's very silly but anything this flippantly thought provoking gets my thumbs up, for sure.



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DRAWING BLOOD

Turtle Rock's **BACK 4 BLOOD** has bigger ambitions than just being *Left 4 Dead 3*.

By Morgan Park



Back 4 Blood

It's telling of *Left 4 Dead*'s quality that there still isn't a co-op shooter that has quite outdone it. Unlike many popular multiplayer games of 2021, *Left 4 Dead* doesn't ask you to theorycraft a build or study a meta. There's nothing to understand beyond a few core principles: shoot and keep moving. That purity is why it was a foundational game for my friends and I over a decade ago and why we still squad up to mow down zombies 13 years later.

We've seen plenty of fantastic games riff on Turtle Rock Studios' original template since the series was unceremoniously shelved in 2009, but only now are its original creators jumping back into fray. With *Back 4 Blood*, Turtle Rock is staking its flag in the ground and taking back the genre it created. Well, that's the idea.

NEW BLOOD

Turtle Rock's first official action as zombie co-op reclaimers? Ditch the survivor narrative. According to Turtle Rock co-founder and design director Chris Ashton, *Back 4 Blood*'s playable characters are hunting the zombies, not the other way around. "Our setting is a year after the apocalypse and answers the question 'What happens next?'. Now we've got stable communities of people in strongholds. We call our hero characters 'Cleaners' because they voluntarily go out into the wild and take on missions to try to put an end

to the Ridden," Ashton says. "In our world, there is hope for a future. This theme has a trickle-down effect into all elements of the game."

You feel the tonal difference as *Back 4 Blood*'s characters quip in a more lighthearted, confident way, but the basics really do feel like *Left 4 Dead 3*. Campaigns follow the same exact four act structure. Each mission is a familiar mad dash from one safe room to the next. Special infected include a Spitter that can root you in

TURTLE ROCK IS AFTER SOMETHING BIGGER THAN A SPIRITUAL SEQUEL

place, a Tallboy with an oversized right hook, and a bloated Retch that will expunge gallons of hord-attracting acid when its belly is pierced. Yep, there's also an AI director pulling the difficulty strings behind the scenes. Treading this well-known ground is a comfortable proposition, but its familiarity is cut by key additions that make *Back 4 Blood* an inherently deeper and more complicated game.

With one foot firmly in the past and the other dabbling with modern conventions like sprinting, aiming down sights, and character-specific abilities, it's clear that Turtle Rock is after something bigger than a spiritual sequel.



BELOW: The game boasts some impressive lighting effects courtesy of Unreal Engine 4.

That was cemented when I fired up *Back 4 Blood*'s first mission and discovered how brutal it can be. Weapons and items have to be purchased from safe rooms using in-game copper. Between weapons, attachments, throwables and all-important healing items, my group's shopping list felt as crucial to survival as shooting straight.

TOUGH CROWDS

Speaking to teamwork, Ashton says *Back 4 Blood*'s less forgiving elements come down to giving players more





ways to succeed (and fail). “The simplest way to drive teamwork is to design a game where it’s hard to win otherwise. Players really want to win. So if that means sharing ammo or first aid kits, that’s what people are going to do. A less obvious but related philosophy is that we have to leave room for teams to be bad. The more room there is for a team to fail, the more room there is for a team to be extra awesome,” he says. “It’s important to give teams the space to stand above the rest.”

Like several aspects of *Back 4 Blood*, I’m skeptical of what this economic shift truly adds to the game. Turtle Rock is trying to encourage tactical decisions at the start of a round, but to me it feels limiting at the moment.

Through several playthroughs I saw few opportunities to loot support items off the beaten path. With no promise of another medkit along the way, I noticed a reluctance in my squad to let loose even on the base difficulty. When you do use up resources, it’s easy to find yourself on the backfoot heading into the next chapter. Ammo is a big factor in that too. Gone are *L4D*’s universal ammo piles in favour of limited ammo drops divided by weapon type. The last thing I want to do while a horde of 40 zombies chase us down is litigate who needs rifle ammo the most.

DECK SLAYER

An early winner in *Back 4 Blood*’s new formula is its modifier cards. Every round kicks off with the AI director serving two to four cards

THE CLEANERS

Meet your zombie-slaying crew



EVANGELO

- Starts with the machete
- Automatically breaks out of grabs
- Increased stamina regen
- Double movement speed



WALKER

- Starts with the Glock 23
- Precision kills increase accuracy
- Max health increase
- Increased ammo cap



HOLLY

- Starts with a baseball bat
- Burst of stamina on kill
- Increased max stamina
- Deals double damage with melee weapons



HOFFMAN

- Starts with the M1911
- Can find ammo on kill
- Increased throwable capacity
- Starts with ammo pack



LEFT: The safe room is a little island of calm in the apocalypse. An island with filing cabinets.



BELOW: How many faces does one zombie need?

that determine which special infected will populate the map. Players react by drafting their own handful of cards from a custom deck. Most cards I was served were passive buffs to healing speed or weak spot damage that can be stacked with your party if they play the same ones. The alpha build had a set number of cards unlocked from the start, but players will find new cards in missions through normal play.

“The goal with this system is to make sure that progression doesn’t separate players or do anything funky with the numbers, like zombie health or weapon damage. The idea is that my progression helps you and vice versa,” Ashton noted.

“The cards also let players customise gameplay to their liking. For example, some nostalgic players don’t like aiming »



BETTER TOGETHER *The evolution of co-op shooters*

2013

Payday 2

Co-op heisting with years of updates

2016

Killing Floor 2

The best in wave-based survival

2020

Deep Rock Galactic

Procedurally generated levels full of ore and bugs

2008

Left 4 Dead

Kickstarted the genre

2015

Vermintide

L4D with Warhammer and swords

2019

GTFO

Scary as hell, with a focus on stealth

2021

Back 4 Blood

Turtle Rock wants to take back the genre

» down sights and prefer to shoot from the hip. There is a card that turns off ADS while greatly increasing hip-fire accuracy on every weapon!”

That last one certainly appeals to me. I appreciate the extra mobility afforded from *Back 4 Blood*’s modern sprint and mantling, but all ADS does is kill the momentum in a game that’s all about staying on the move. Another favourite of mine is guaranteed one-hit-kills from my melee attacks, which basically let me run around like a madman knifing zombies in the brain en masse. As far as I’m concerned, they should get even weirder – like *Halo* skulls weird. Give me a limitless chainsaw that replaces both weapon slots or an obscene speed boost that makes the nasty special infected target me more often. If Turtle Rock is staking *Back 4 Blood*’s replayability on its inventive modifiers, then I hope to see many more cards that meaningfully transform my playstyle.

CO-OP SHOOTOUT

Especially because, wow, it’s a good time to shoot stuff with friends cooperatively. There may not be much out there scratching that



LEFT: Every game’s got to have its own name for zombies these days. Meet the Ridden.



specific *Left 4 Dead* itch, there are plenty of incredible co-op shooters that are worth your time. Space dwarf exterminator sim *Deep Rock Galactic* is only getting better with age as Ghost Ship Games continues to add new biomes and weapons. Fatshark’s *Vermintide* series is a fantastic twist on *L4D* with a melee focus in a Warhammer-flavoured world. And on the horizon is *Rainbow Six Quarantine*, a *Siege* spinoff that is focused entirely on co-op alien zombie murder.

Back 4 Blood certainly has more competition from day one than its predecessors, but that’s not worrying Ashton one bit. “We love playing these kinds of games and although there are a good number of competitors out there, we feel there is enough space in the genre for us to do our own thing with *Back 4 Blood*,” he says. Ashton also says that *Back 4 Blood* isn’t taking much direct influence from similar games, but noted that they can inform how their ideas will be received by players. “By-and-large, we really like to keep our heads down and do our own thing, regardless of what the rest of the industry is doing. We’re all huge



IT'S A GOOD TIME TO SHOOT STUFF WITH FRIENDS COOPERATIVELY

gamers so the hope is always that if we make something we love to play, other gamers will love it too.”

One element that basically every modern multiplayer game shares is some sort of ongoing service game model, be it a seasonal battle pass or planned expansions. That’s one area that Turtle Rock isn’t ready to talk about yet, but Ashton reaffirmed that the team “wants to have ongoing content after launch and are still in the planning phase”. Considering the game’s structure, it’d certainly make sense to introduce new cards, Cleaners, or weapons on a regular basis. That said, Ashton stopped short of labelling *Back 4 Blood* a ‘service game’, so Turtle Rock and its publisher Warner Bros may have different plans...

Assuming a few notable issues like performance dips and strange AI behaviour can be ironed out before launch, *Back 4 Blood* has a good chance of catching on. It’s certainly not the purist *Left 4 Dead* successor that a part of me still desperately craves, but it’s pretty darn close. If you missed the open alpha last year and want to give it a shot before its June 22 release, Turtle Rock is still taking sign ups for online tests at back4blood.com. ■

TOP: The latest in Cleaner fashion. Comfortable and practical.



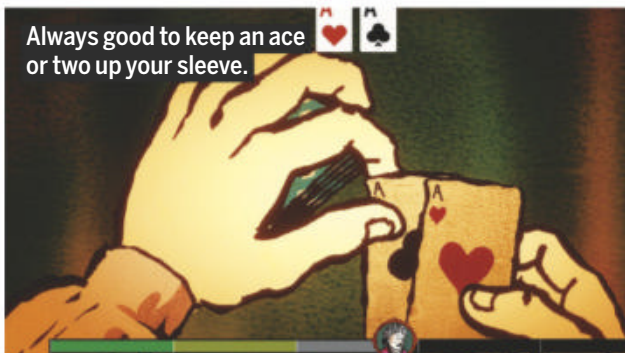
PREVIEW

Card Shark

A timer at the bottom of the screen puts pressure on your moves.



Always good to keep an ace or two up your sleeve.



Collecting the cards in a certain order is vital for this cheat.



The first rule of *Card Shark* is not to get caught.





NEED TO KNOW

RELEASE
2021

DEVELOPER
Nerial

PUBLISHER
Devolver Digital

LINK
cardsharkgame.com

CARD SHARK

A love letter to history's best tricksters, scammers, and cheats

We all love that feeling when we've gotten away with something, and Nerial's upcoming adventure game *Card Shark* is the epitome of that mischievous excitement. Playing as a quick-handed cheater in 18th century France, you're tasked with climbing high society by beating nobles in games of cards.

Together with your partner and accomplice, the tricky Count of St Germain, you travel from location to location across France swindling politicians and royals out of their riches through a number of deviously clever card techniques. "It's a story of intrigue where people backstab each other," *Card Shark*'s Nicolai Troshinsky says. "There's conspiracy, lying, people pretending to be other people – all that sweet stuff"

You'd think in a game about swindling the rich, you'd get to play the Robin Hood figure and bask in your own greatness, but here your role is a bit more subtle than that. "In *Card Shark*, you play the side-man," Troshinsky says. "You never win. You need to get your partner to win effortlessly, that's the goal. You're the invisible force that creates success, but you never take the glory."

Playing as the silent wingman is interesting. Manipulating the deck, marking cards, secret signals – there are plenty of techniques to learn for propelling your partner to a winning pot, and teamwork is the key to walking away from the table richer.

Silent communication with your partner can be done through a number of different methods. You can cheat off the table, playing as a discrete waiter who's serving wine whilst taking sneaky peeks at the opposition's hand, or on the table, directly manipulating the deck.

"A really hard cheat is arranging the deck as you shuffle it," Troshinsky says. "You make it look like you're genuinely shuffling it, but in reality, you're shuffling specific amounts of cards. The trick is moving precise amounts of cards at precise times, in order for specific cards to land in certain positions, so when the deal happens, they'll be dealt directly to the person you want."

PLAY YOUR CARDS WRONG

The devil is in the details. Troshinsky explains that the shuffle part of this technique is easy if you do it slowly, but "what takes years to learn is how to make it look like a natural shuffle". In *Card Shark*, this technique is introduced later in the game when players have a better understanding of certain cheats, including how to execute them in a perfect chain.

Chains of minigames differ from game to game, and serve to organise the exact set-up you need for your partner to win. An example of this would be collecting the cards from the table in a certain order, then executing a fake shuffle, and then completing a false cut to complete the chain. You can fail minigames, from messing up your timing to selecting the wrong cards, but depending on the situation you may have moments to recover. Which is a relief, because you do not want to be caught red-handed in a time period where everyone's packing a blackpowder pistol.

Card Shark puts you in the role of a con artist while spotlighting the antics of other swindlers, but themes of deception and treachery will also be explored off the table. "The game is centred around cards, 100%, but we do take the opportunity to talk about deception, lies, and greed," Troshinsky says. "We try to approach the narrative and the people you encounter from a number of aspects, from politicians to petty thieves, mystics, and scammers. When is it okay to break rules and how much is too much?"

Rachel Watts

FIRST LOOK

"WHAT TAKES YEARS TO LEARN IS HOW TO MAKE IT LOOK LIKE A NATURAL SHUFFLE"

All of the minigames in *Card Shark* are based on real cheating techniques.

PREVIEW

Total War: Warhammer III



Surely that hat is just going to make her even colder?

NEED TO KNOW

RELEASE
2021

DEVELOPER
Creative Assembly

PUBLISHER
Sega

LINK
totalwar.com

TOTAL WAR: WARHAMMER III

The epic trilogy ends with its largest war yet

After leaving us guessing for a couple of years, Creative Assembly has spilled the beans on *Total War: Warhammer III*, and it's going to be a big 'un, featuring a war of "unprecedented scale" spread across the Realm of Chaos and the Lands of the East.

"In campaign map terms, it's big... roughly twice the size of *Warhammer II*'s Eye of the Vortex map," says game director Ian Roxburgh. "And it needs to be, as this is the part of the Warhammer world that gives way to the Realms of Chaos, which take up a significant area in their own right. But I suppose more than anything, you can apply the term 'unprecedented scale' to our ambition for the game. We're aiming to conclude the trilogy in a big way – from the narrative, to the playable races, to the wealth of new features."

The armies of Khorne, Nurgle, Slaanesh, and Tzeentch are *Total War: Warhammer*'s first daemonic factions, fielding monsters like the gruesome Bloodletters and hulking Bloodthirsters. The introduction of these factions also creates new wrinkles, because it's not like a bunch of Chaos-loving daemons are going to be into stuff like diplomacy, which has become an increasingly significant part of the *Total War* franchise.

ICE TO MEET YOU

Not quite as extra are the pair of human races, Cathay and Kislev, though they could be just as interesting. Cathay,

Warhammer's analogue for China, exists in the tabletop game just as lore, so there's no army for Creative Assembly to work with. The shape the faction will take, then, is a bit of a mystery.

"We've built this incredibly close working relationship with Games Workshop over the years, and Cathay's realisation in *Warhammer III* is testament to that," says Roxburgh. "Their design team led the way in defining what Cathay would look like as a fully-fledged faction, and we've fed that design through the *Total War* lens, so in the final game you'll see a playable race as complete and as storied as any other."

Kislev should also provide some surprises. Like Cathay, the Russian-inspired faction doesn't have an official army in the current version of the tabletop game, though with the upcoming resurrection of the Old World, Games Workshop is currently designing one.

The previous games featured two major events that they hung on: the Chaos invasion in *Warhammer I* and the fight over the Vortex in *Warhammer II*. The final game will also feature some kind of big objective or crisis, though Creative Assembly's keeping that in its back pocket for now. Roxburgh does say, however, that the team's learned a lot about designing Warhammer campaigns, and that experience coupled with player feedback means it's got something "appropriately epic" in mind for the trilogy's conclusion.

All this talk of massive-scale campaigns would have left me a little bit worried about performance a few years ago, but Creative Assembly's made great strides in that regard. You no longer have enough time to make a cup of tea and start a book after you hit 'End Turn'. These improvements bode well for *Warhammer III*, and Roxburgh says that "performance is always foremost in our minds". The work to optimise this behemoth continues.

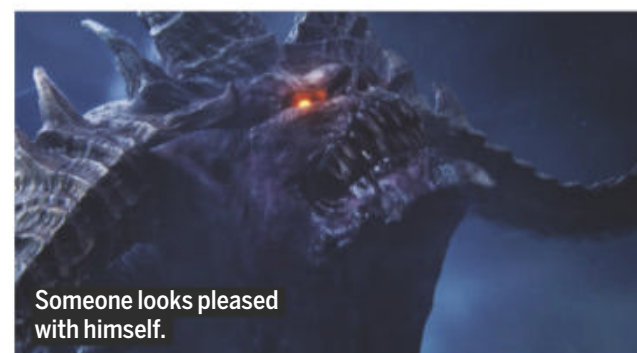
Even with a lot still under wraps, I'm incredibly excited. *Warhammer II* has grown into my favourite *Total War* (see p110), and it seems like *Warhammer III* will be even more unusual and experimental. There's no release date yet, but Creative Assembly is aiming to get us back into the war this year.

Fraser Brown

FIRST LOOK

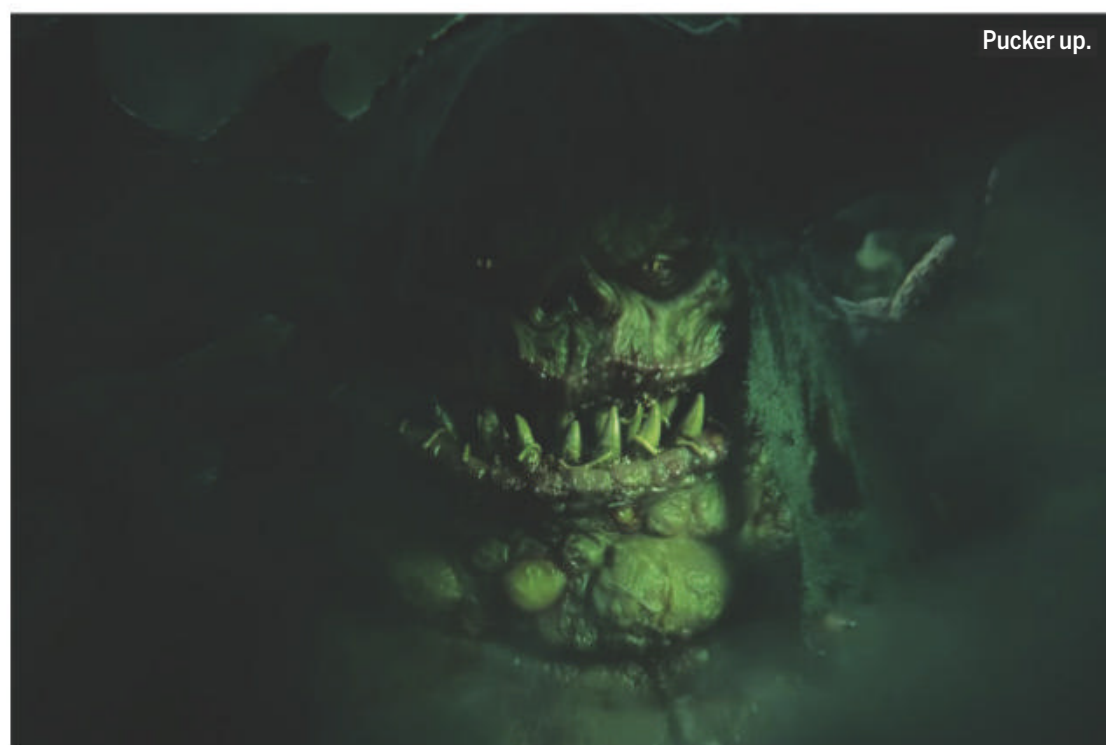


The campaign will be twice the size of the last one.

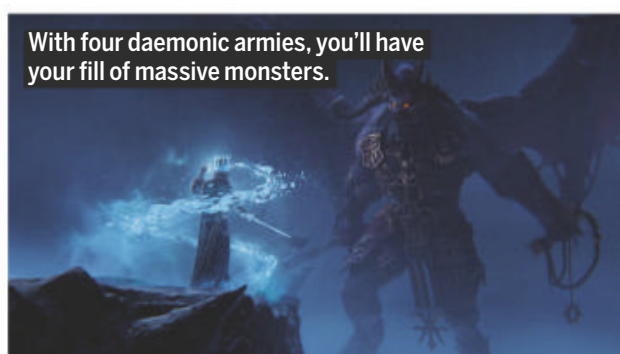


Someone looks pleased with himself.

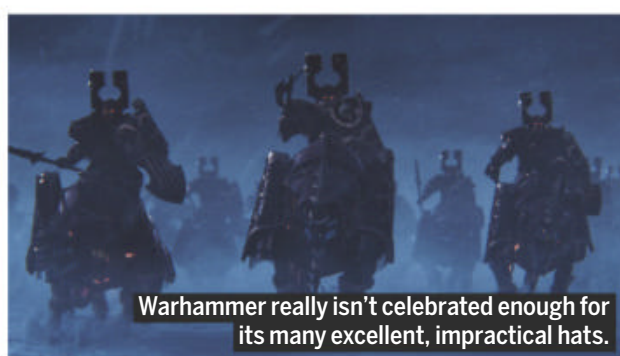
"WE'VE BUILT THIS INCREDIBLY CLOSE RELATIONSHIP WITH GAMES WORKSHOP"



Pucker up.



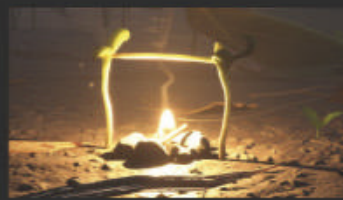
With four daemonic armies, you'll have your fill of massive monsters.



Warhammer really isn't celebrated enough for its many excellent, impractical hats.

Grounded





NEED TO KNOW

EXPECT TO PAY
\$39.95

DEVELOPER
Obsidian

PUBLISHER
Xbox Game Studios

LINK
grounded.obsidian.net

GROUND

Finally, a survival game with good bugs

When I first found myself trapped in an oversized garden in *Grounded*, Obsidian's homage to *Honey I Shrunk the Kids*, I quickly became a killer of ants. Much bug blood was spilled in those early days, but then came the guilt, especially when I discovered that, like many of *Grounded*'s beasties, the ants aren't naturally hostile.

I had no idea, as I was bludgeoning them to death with rocks, that when they waddled up to me they were just being inquisitive. When I see a bug the size of a horse heading my way, I assume it wants to eat me. I've tried to make amends, and for most of the last six months I haven't so much as bopped an ant with my tiny fist. We're not quite friends yet, but we're definitely cordial neighbours. Well, most of the time. It's not been without its challenges, however, because these ants can sometimes be massive pricks.

After the initial revelation that I'd been needlessly slaughtering peaceful bugs, we still had some awkward run-ins. All of *Grounded*'s garden critters have distinct behaviours that go beyond just being chill or aggressive. A wolf spider will try to end you the moment it spots you, but isn't beyond running away if you prove to be a bit too tough to handle. Goofy gnats, meanwhile, like to hover around and give you the occasional bop, but they won't instigate any fights. Of the lot, however, the ants are the most unpredictable.

When I started building my first base, back in June, the ants quickly started to become a nuisance. They're an inquisitive and slightly greedy bunch, so every day I'd have to chase them away from my little storage area, where they'd inevitably be rooting around for food. I became exasperated, because it wasn't like I was rolling in resources. I really needed that

stuff. I could have died without it. Look, that's my defence and I'm sticking to it. The ants had to die.

GARDEN WARFARE

After that, things got rough between us. Instead of just a few of them coming to rummage around in my wicker baskets, wee armies started to appear. And when I fought them off, they came back with not just more ants, but bigger ants. These beefcake soldier ants can really kick the crap out of a miniaturised child. They even started trashing my base, knocking down walls and entire buildings. Granted, these buildings were made out of grass, but grass is pretty thick when you're tiny.

The relationship became untenable. I'd forgotten about the nightmarish spiders or my mission to embiggen myself, with this ant war taking up all my time. There were just too many of them, and they kept coming. I realised I'd probably need to move the base, but what if they followed me? Had I just picked a fight with one hive, or did all ants have it in for me? It might be a suburban garden, but *Grounded*'s ecosystem still feels like an alien one that needs to be learned and studied.

I didn't end up moving. Instead, I started again, this time with a co-op bud in tow. This new beginning allowed me to avoid the mistakes I'd made with the old ants and try to be a better neighbour, or at least a less bloodthirsty one. My co-op partner and I were on the same page, which made it easier, and we worked together to find peaceful solutions whenever we bumped into some bugs. Shooing ants away and trying to block them with our bodies has just become part of our routine.

On more than one occasion we've returned to our base to find a line of ants scarpering with our supplies. They clutch their ill-gotten gains in their pincers, shamelessly displaying what they've stolen, giving them a sort of roguish charm. It's hard not to laugh as they leg it back into the grass forest with their

PLAYED
IT

GROUND'S ECOSYSTEM
STILL FEELS LIKE AN ALIEN ONE
THAT NEEDS TO BE LEARNED

Grounded



Even the labs are adorable. Science is very cute.

Blocked by its own web – how incredibly embarrassing!



➤ bounty of stolen gnat meat. Occasionally we try to chase them, but once they've got their pincers around the goods there's not a whole lot we can do without fighting. Nature sometimes wins.

ANT FARM

Burglaries have become less of a problem since we started placing all of our precious stuff high up, safely tucked away in buildings on stilts. The ants still visit frequently, but there are fewer opportunities for them to cause mischief. That hasn't stopped them from trying to bring chaos back into our base, though. Recently, I returned after an extended stay in a new waterside outpost we'd just established, and discovered that the damn ants had turned our old base into some kind of weevil murder pit.

Weevils are among *Grounded's* most friendly creatures. They don't fight, they don't cause any mischief, and they taste pretty good. They're probably more deserving of my friendship than the ants, so it's a shame that they're one of my main sources of nourishment. The ants like snacking on them too, which I guess explains why I found a huge herd of them being systematically slaughtered in my base. The ants had even managed to corral them into one of *Grounded's* giant landmarks, the Mysterious Device. It has a hollow interior, so the ants had chased the weevils inside it, leaving them hopelessly trapped. The noise... it left a mark on my soul. Unrelated, I was also very hungry, and that's the only reason I ducked into the Mysterious Device to grab the weevil remains the ants hadn't already snatched. No point letting it go to waste!

AI animals hunting each other has become a bit of a shortcut to creating a world that seems alive. It's incredibly effective, too. It's entirely conventional these days, but seeing the world react and change without my input still makes me believe in it more. That effectiveness possibly explains why most games stop there. Rockstar went to ridiculous lengths to make *Red Dead Redemption II* feel like a tangible world, down to the infamous shrinking horse balls, but while its critters still have behavioural patterns, ultimately everything still boils down to hunter and

prey. That's why I keep coming back to *Grounded*. Like the ants, it's unpredictable.

That it's slowly unfurling through Early Access has unexpectedly enhanced its capacity to surprise. I'd generally much rather play fully-formed games, but *Grounded* is a big mystery – from its narrative, to how its critters will react to you – and benefits from being revealed over months. You start getting used to things, and then suddenly there's a massive bird that's the size of a bloody skyscraper looming over your base, dropping feathers everywhere. Like a real ecosystem, a few tweaks can have a big impact. And because it's still growing, I don't feel the need to devour it all at once; I'm exploring it slowly, with some big gaps, and then returning to find a whole new set of mysteries waiting for me.

WEIRD SCIENCE

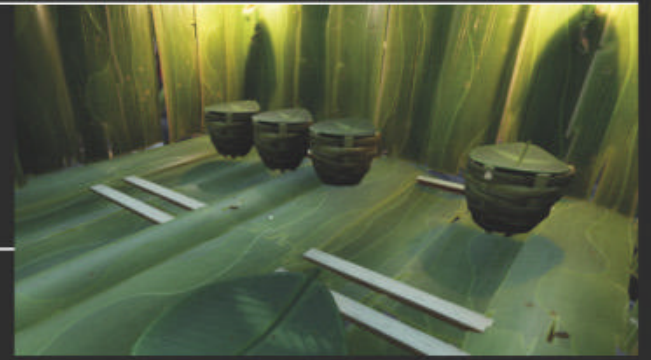
All survival games task you with expanding your knowledge and learning to master your environment, but *Grounded's* the first game I've played in a long time where I'm actually excited to discover new things instead of just relieved that I'll have one less thing to worry about. When you've built a hut in the woods a thousand times, that doesn't hold many surprises, but *Grounded's* exotic world means that every construction project has a weird quirk and every expedition holds the promise of a long and meandering adventure into the unknown.

At first glance, it doesn't seem anything like Obsidian's RPGs, but the emergent narratives it creates would absolutely feel at home in any number of them. I've been stuck between warring factions of bugs, journeyed into the dark heart of an evil thicket with eight-legged monsters hounding my every step, and fumbled blindly deep below the earth in search of enlightenment – or as the game calls it, Raw Science. It's almost enough to make me forget all about bullshit like hunger and thirst meters.

Through all those trials and adventures, though, I haven't beaten up a single ant. Not since I started fresh. Not even the soldier ants that I occasionally come across, who are automatically hostile. I've gotten so used to it now that it might as well be a rule etched in stone: Leave Ants Alone. I didn't even seek out retribution when, after devouring that herd of weevils, they got over-excited and completely trashed my moisture farm. Ants will be ants.

Fraser Brown

THE DAMN ANTS HAVE TURNED OUR OLD BASE INTO SOME KIND OF WEEVIL MURDER PIT





Unreal World

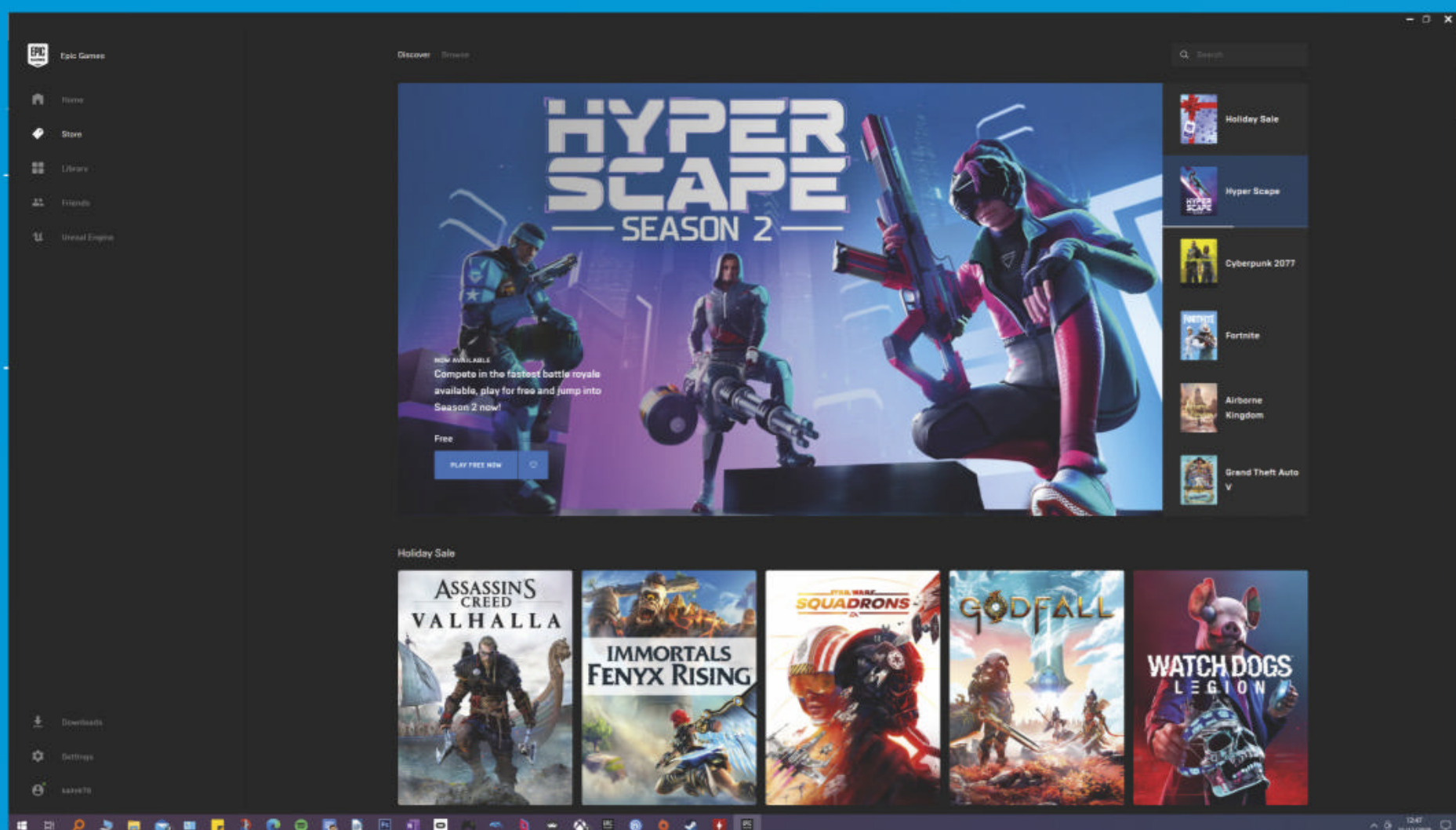
Two years on, **EPIC GAMES STORE** is still a golden ticket for developers and irresistible bait for gamers. *By Rob Zak*



he Epic Games Store celebrated its second anniversary recently. You can be forgiven for not setting a calendar reminder. The store's impact on the PC gaming landscape has been fascinating, but controversial – a suspiciously philanthropic entity that's provided gamers with dozens of wonderful freebies, fledgling developers with financial security and a foot-up in a tough industry, and Steam with some proper competition.

It's also pissed a lot of people off. From fairly trifling complaints about having to use a separate launcher other than the de facto PC darling Steam, to the slightly less trifling issues around aggressive platform exclusivity and its poor infrastructure when compared to Steam.

All of this can make for a confused tangle of feelings about the Epic Games Store, and even two years on the merest mention of it seems to instantly inspire discussion and, more often than not, arguments. So as a sort-of birthday celebration (albeit one where I whisper all the recipient's character flaws into their ear while giving them a hug) I've decided to see how far it's come since its inception, and chat with the developers of games that have launched on both Epic and Steam to get an idea of how the creators themselves feel about the two platforms. ➤



» WINDOW SHOPPING

Clicking around the Epic Game Store's slick, flat pages today, the most striking problem is that it's largely as threadbare as it was two years ago. Its user interface and frontend features just don't feel worthy of a platform that continues to snap up swathes of big IPs and indie games alike in exclusivity deals. And there are no community

features – no hubs filled with silly memes and in-jokes, no place to chat with strangers (or with particularly gregarious developers), no workshops where players' passion for a game feeds back into it through mods.

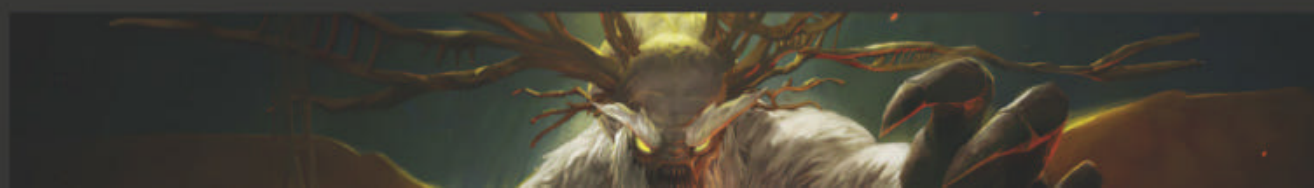
On that last point, the Epic Games Store introduced mod support for its first game, *MechWarrior 5*, back in July. It's a start, but the lack of comments or forums strips away the sense of community that's so endemic to modding. It's like comparing Bethesda's controlled,

sterile mod pages to the beautiful mess of Nexus Mods – I'll take the noise and the squalor and the occasional NSFW content over a controlled clean grid of thumbnail images any day. Modding is *meant* to be a bit messy.

The lack of these little rabbit warrens leads to a lack of discovery. When looking for new and unknown games to play on Steam, the trailers and screenshots only pull me in so far – it's more often the weird player stories, streams, and community creativity that really show me what a game is about. There's now a 'Discover' tab that serves as the store's front page, ostensibly to "help users find new interesting games", but the games it coughs up aren't exactly ones that anyone needs help discovering.

At the time of writing, five of the games on the first page of 'Discover' are big Ubisoft titles, sandwiched between *Fortnite*, *Cyberpunk 2077*, *Star Wars: Squadrons*, and *GTA V*. Only one of the ten games on display is an indie. The next thing you'll see when you scroll down is a selection of service games with holiday events – most of them already well known and popular – then you have the daily Christmas freebies. Only after that do the indies

The games it coughs up aren't exactly ones that anyone needs help discovering



really start filtering through, appearing in the 'New Releases' section a few scrolls down.

STEADY STEAM

In contrast, Steam greets me with no less than eight indie titles from the off, using my personal tastes to find games on sale I might be interested in. A little bit further down, I get a list of indies enjoyed by 'players like me' and daily community recommendations, which again highlights lesser-known games. Sure, the algorithms are inevitably imperfect, but they're at least getting my eyes on a wider selection of indie games, while on Epic the main way to get foregrounded as an indie is via the golden ticket of exclusivity or being the free game of the week.

Epic should be lauded for creating a publicly visible roadmap for the store, but it also highlights the company's priorities. Recently added checkouts, currency localisation, wishlists, and growing currency support are useful, but very much storefront-oriented. Achievements, enabled in July, are being added slowly, while a vaguely worded "social overhaul" and user reviews (that will be opt-in for developers) are still a way off. There's no mention of remote play, streaming, or family sharing – the kind of features that separate a storefront designed to sell games from a fleshed out platform designed to make gaming convenient and accessible.

Of course, frustrations with the frontend need to be weighed against how developers feel about the platform, and for the most part it seems that those who have worked with both Epic and Steam are very happy with what's on offer.

DEV-ULGENCE

Close to the Sun is an atmospheric indie game (think *Bioshock* without

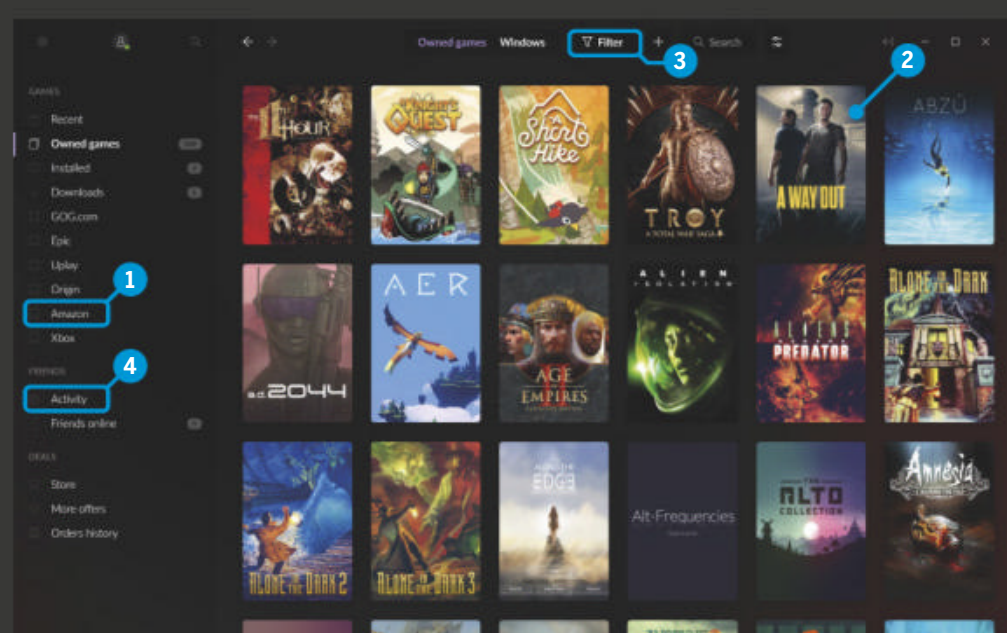
the combat) released in May 2019 as an Epic Store exclusive, before coming to Steam a year later. The game's developer, Roberto Semprebene, says that while sales likely weren't as high as they would have been with a Steam launch, the benefits of exclusivity far outweighed those lost prospective sales.

Beyond Epic's covering of development and other projected costs, *Close to the Sun's* stint on the store as a free game of the week gave it an incredible boost, according to Semprebene. Suddenly, nearly a year after its initial release, dozens of media outlets, subreddits and deal sites were talking again about *Close to the Sun*, simply because it was the latest headliner on Epic's famous free games carousel.

FAR LEFT: Epic Games Store's 'Discover' page leans towards big-budget games that hardly need more publicity.

A GALAXY NOT SO FAR AWAY *Gather your launchers*

If the fragmentation of your PC games libraries makes your gamer sensibilities short-circuit, then GOG Galaxy's launcher could be the answer. The DRM-free store's gaming platform can be used as a pretty frontend for gathering your Steam, Epic, Origin, Uplay and even PlayStation and Xbox games into one easily navigated library.



- 1 Some games libraries aren't supported by GOG Galaxy, but you can get open-source plugins to integrate those too.
- 2 Once you've connected your account, GOG Galaxy quickly scans your library and adds all the appropriate box art.
- 3 You can filter your games from across all your libraries by genre, platform, and any custom tags you've added. It helps you find stuff later.
- 4 This area shows activity among your friends across all your linked platforms, including time played and unlocked achievements.





» “Would we have reached such an audience, being a small and independent studio, even if supported by the great guys of [publisher] Wired Productions?” asks Semprebene. “As a small company that wants to survive and grow, the Epic exclusive deal guaranteed that we would recover costs and continue developing. It also helped us to make our brand known to many gamers who probably did not know us.”

Semprebene didn’t want to share exact figures on purchases versus free downloads, but admitted that the free week played a big part in the game reaching around four million downloads in total. That’s a lot of people owning a game that on Steam has only garnered 211 reviews.

In 2019, the developer of *DARQ* was approached about making it an Epic exclusive, and was told that exclusivity was the only way it would appear on the store. This doesn’t seem to be a consistent rule, however, or Epic’s eased up on it. All the developers I spoke to whose games

simultaneously shipped on both stores said that Epic didn’t express any reservations about it. One of these games is *Calico*, an irresistibly cute game about managing a cat cafe. The game’s publisher Whitethorn Digital, a specialist in cute, small-budget indie games, compared the process of launching on Epic favourably to Steam.

“Great support, direct contact with a human being, simple staging, great backend tools, one-on-one support”, says Whitethorn CEO Matthew White. “But on Steam, every time we launch a game, we spend five-six hours trying to get streaming to the page working, updating the store is a nightmare, build uploading has to be done by a member of our engineering team, and it’s nearly impossible to get support to respond to your requests. Luckily, after four years in business and through the introduction of a mutual friend, we now have a reliable Valve contact, though this process was extremely difficult.”

Gavin Price, studio director behind Playtonic’s *Yooka-Laylee and the Impossible Lair*, was similarly pleased with his studio’s dealings with Epic. “We’ve had no issues creating Epic builds and the store has offered great opportunities for our game to reach a very large audience – we launched as part of 12 games of Christmas [in 2019].”

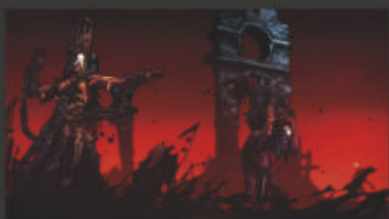
“Great support, direct contact with a human being, simple staging, great backend tools”

UPCOMING HITS *Epic’s pursuit of exclusives seems to be slowing down in 2021, but there are some standout games that you won’t find anywhere else*



PHANTOM BRIGADE

Already playable in Early Access, this turn-based strategy game pits towering mechs against each in crunching battles across adorable little forest towns. The twist is that you can see four seconds into the future, allowing you to outmaneuver your enemies.



DARKEST DUNGEON II

The relentlessly difficult but sadistically rewarding roguelike returns as an Epic exclusive some time in 2021. The biggest news we know so far is that it will be 3D, while retaining the original’s brutal turn-based combat and hellish gothic world.



CHIVALRY 2

With *Mordhau* and *Mount & Blade II*, there are a lot of very good ways to dally in medieval combat on PC. *Chivalry* is one of the classics though, and the sequel looks pleasingly brutal as you kick, dismember and slash your way across online battlefields.

COLD STORE-AGE

When I asked whether these studios would consider Epic exclusivity for future games, their response was a unanimous ‘yes’. Price put it best, “Each game is its own bespoke puzzle in bringing to market in the best way possible, and in this day and age discoverability is always going to be a huge problem, so I think an exclusivity deal regardless of the platform can have huge benefits. We’d be very open-minded about such offers ourselves and can certainly empathise with developers who see this as the right thing to do by their game – that ultimately they could be relying on to make a living or springboard for future success.”



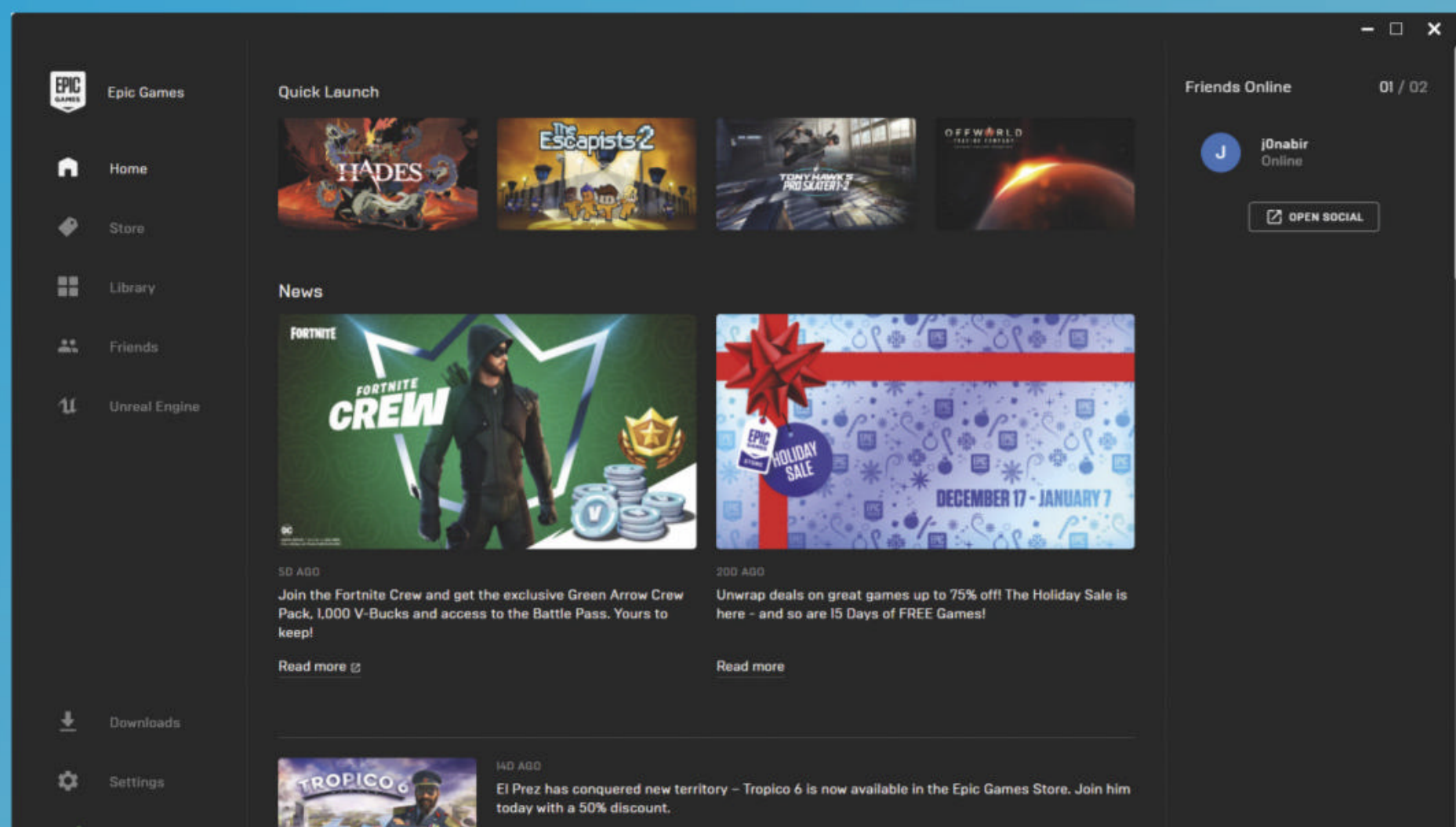
So after two years, the Epic Games Store remains strangely similar to how it started in both design and principle – a virtual golden ticket for developers and an awkward but alluring platform for gamers, dazzling us with its gleaming hoard of free videogame riches. Its lack of community and discovery features are easy to ignore when Epic is keeping both sides of the equation satiated with its seismic show of monetary magnanimity.

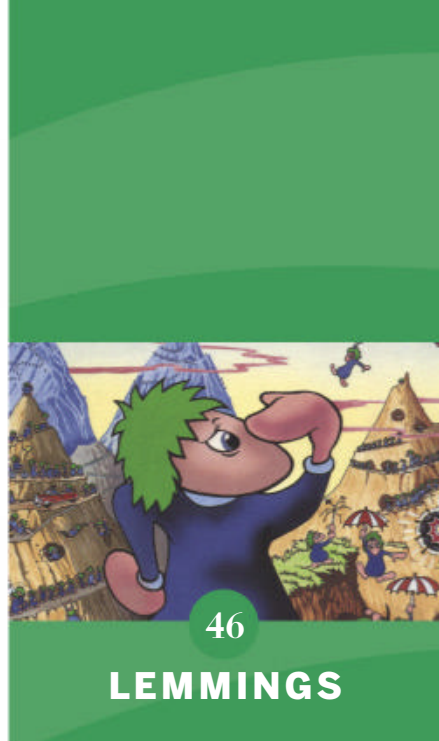
But will that same goodwill carry over into genuine consumer loyalty when Epic's free game sideshow eventually comes to an end? Will indie games get the opportunities and exposure they need on the Epic Games Store without the publicity of exclusivity or being podiomed as the free game of the week?

Based on my own experience as a ritualistic beneficiary of Epic's giveaways and £10 game coupons, I feel that loyalty towards the Epic Games Store is as shallow as the pages of the store itself. It's not a convenient place to look for interesting new indie titles or arrange gaming get-togethers with friends; it's a storefront with some eye-catching titles and claims to being a Steam competitor, but step inside and it's an eerily hollow place. And that is making me question the sincerity of the impressive window display as I inch back towards the exit and go and find something on Steam instead.

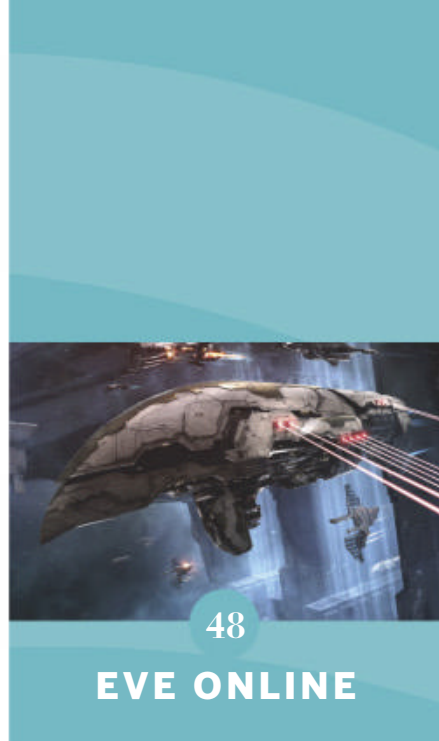
There is definitely a lot of work to do here if Epic wants to hold my attention beyond this extended, expensive honeymoon period. ■

BELOW: My Epic Games Store library has around 130 games so far. Now to actually play them...





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LEMMINGS



48
EVE ONLINE



50
SIMCITY 2000



52
LEFT 4 DEAD

P C G A M I N G

LEGENDS

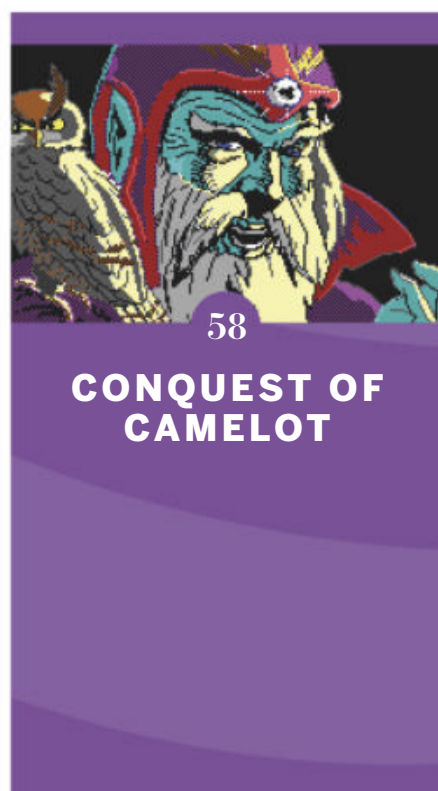
Eight games that have defined PC gaming – and defined us as PC gamers



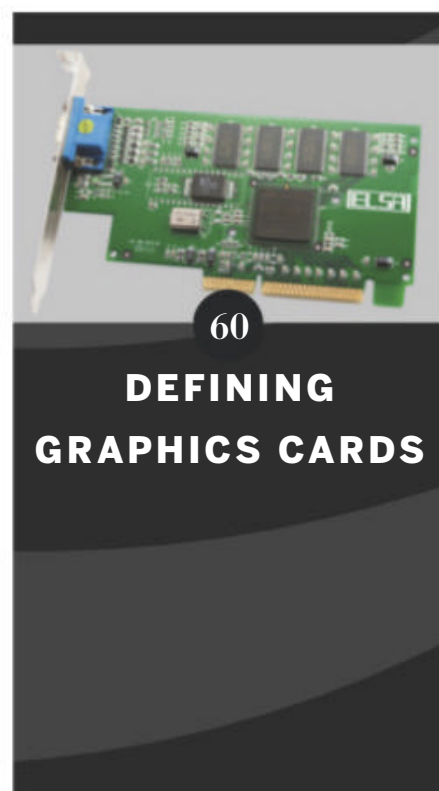
54
CIVILIZATION



56
3D MOVIE MAKER



58
**CONQUEST OF
CAMELOT**



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**DEFINING
GRAPHICS CARDS**

44
HALF-LIFE 2

Plenty of games can claim greatness – whether acclaimed hits, or cult classics. Only a handful can claim to have changed the industry, and players, forever. Over the following pages are eight that hold that honour. Not only have they helped define PC gaming, they've defined us as PC gamers. And we're also celebrating the hardware that made them possible, with a look back on the graphics cards that shaped PC history.



RAISING THE BAR

The subtle, hands-off storytelling of **HALF-LIFE 2** is still hard to beat. *By Andy Kelly*

The magic of *Half-Life 2* lies in how it tells its story. In most games developed in the early 2000s you're forced to endure endless exposition about the world and the state it's in – usually in the form of cutscenes. In *Half-Life 2*, a few scraps of old newspaper stuck to a notice board achieve the same goal; and in a much more evocative way. In the secret laboratory of eccentric scientist Isaac Kleiner, this entirely missable detail refers to a “seven hour war”, Earth surrendering to the invading Combine, and villain Wallace Breen being declared administrator of Earth.

It's everything you need to know in one unassuming texture file – but also, importantly, it leaves enough of the finer details out to let your imagination run wild. This is more effective than an elaborate, expensive cinematic showing the Combine invasion of Earth would ever be, and puts you on a level playing field with Gordon Freeman. Having just been yanked out of stasis by the G-Man, he knows as much as you about this

bleak, Orwellian nightmare world; that is, ‘not much’, which only adds to the unsettling mystery of how Earth ended up like this.

This kind of environmental storytelling continues throughout *Half-Life 2*, painting a more detailed picture of everything that happened while Freeman was on ice. And as you learn more about the invaders' infrastructure, the extent of their assault on the planet becomes chillingly clear. At several points in the game you catch glimpses of Stalkers; human bodies gruesomely retro-fitted with alien technology, turned into mindless slaves. Seeing one out of the corner of your eye is, again, more affecting than having someone sit you down and tell you everything about them.

FREE REIGN

Half-Life 2 is a game that plays to the strengths of the medium, using player agency as a way to tell a story in a more interesting, intimate way. It's also a masterclass in subtlety. When it's time to travel to Ravenholm, an abandoned town infested with headcrab zombies, all Alyx says, gravely, is, “We don't go to

Ravenholm.” And that's all it takes. That sentence is absolutely loaded with meaning, and it also makes your first tentative steps into the place scarier. What did she *mean* by that? Valve understands the power of holding back, that less is more, which is something that eludes many developers even now, 16 years later.

Of course, storytelling is just one part of the package. *Half-Life 2* is also a great FPS, with the gravity gun adding an improvisational feel to its firefights. Switching to this once revolutionary physics-manipulating weapon when you're backed into a corner, plucking a saw blade or radiator out of the level and transforming it into a deadly weapon, still feels incredible. The raid on Nova Prospekt, the brutal Combine prison, is tense and thrilling, and working with the resistance in City 17 towards the end of the game features some superb set-pieces.

If you haven't played it for a while, you might wonder if the people who still eulogise *Half-Life 2* are half-remembering it through a mist of nostalgia. But play it and you realise that, although it has aged in some ways, it still feels like an important, landmark game. It still delivers as a first-person shooter, and the way it relays its story is still wonderfully subtle and restrained. It's also exciting to revisit when you consider that Valve may be falling back in love with the series. The end of VR prequel *Half-Life: Alyx* dramatically opens up the very real possibility of a *Half-Life 3*, teeing up a sequel I'd lost all hope of ever being made. ■

TOP LEFT: Freeman drives his junker of a car along Highway 17.

VALVE UNDERSTANDS THE POWER OF HOLDING BACK, THAT LESS IS MORE, WHICH IS SOMETHING THAT ELUDES MANY DEVELOPERS EVEN NOW



BIG CITY *Key locations in City 17*



TRAIN STATION

Freeman arrives in City 17 by train, meeting oppressed citizens and enslaved Vortigaunts, all watched over by the ever-present digitised mug of Wallace Breen, the human face of the Combine invasion force.



CITY SQUARE

Emerging from the train station, Freeman gets his first glimpse of the Citadel, the sinister headquarters of the Combine. The city's distinctive Eastern European architecture is especially prominent here too.



CITADEL

Freeman eventually makes his way into the Citadel, confronting Breen and his alien lackeys. Inside we see the Combine forces being created, including a production line of War of the Worlds-inspired Striders.



SECRET LAB

One of the few safe places in City 17. Here Freeman is reunited with Isaac Kleiner, a colleague from Black Mesa. And if you pay attention you'll learn a bit more about how the Combine conquered Earth.



FAR LEFT: The game began life as a single animated sprite created by DMA's Mike Dailly.

LEFT: *Lemmings* is one inspiration for a remote-controlled golem army in Terry Pratchett's *Interesting Times*.

FALLING IN LOVE

LEMMINGS still haunts my nightmares almost three decades later. *By Edwin Evans-Thirlwell*

The medieval historian St Bede – aka The Venerable Bede, which really ought to be a band name by now – once compared life to a sparrow's flight through a banquet hall on a winter night: a moment of light and warmth, bookended by darkness. I sometimes like to think of DMA Design's *Lemmings* as a modern reworking of this existential fable, with a couple of major differences. Firstly, it's about stupid rodents rather than birds, and secondly, it unfolds in a kind of Luna Park version of hell, all novelty crystals and gold pillars set to unholy chiptune renditions of songs like *London Bridge is Falling Down*.

Unlike Bede's sparrow, the lemmings need a bit of direction. They drop from a magic window and trundle

brainlessly left or right unless otherwise ordered. Your goal is to get them through this souvenir-stand underworld against the clock, by assigning skills such as digger or climber. On the other side of both the entrance and exit portals lies not wintry oblivion, but a heavenly vista of green slopes and blue skies.

If the moral of Bede's fable is to savour every conscious moment, the moral of *Lemmings* seems to be that life is a nasty interlude full of spikes and lava pools, to be navigated as quickly as possible.

RUSH MODE

I was seven when I first played *Lemmings*, and it properly did a number on me. I was immediately panic-stricken at the thought of taking responsibility for creatures who are their own worst enemies – creatures who seemingly exist only to traumatise anybody with a

protective streak. But once I'd begun, I couldn't let go. Who else, after all, was going to guide these hapless vermin back to their happily-ever-after? *Lemmings* was the game that taught me to empathise with make-believe entities, and I glimpse its mop-haired spectre in every management sim I play today.

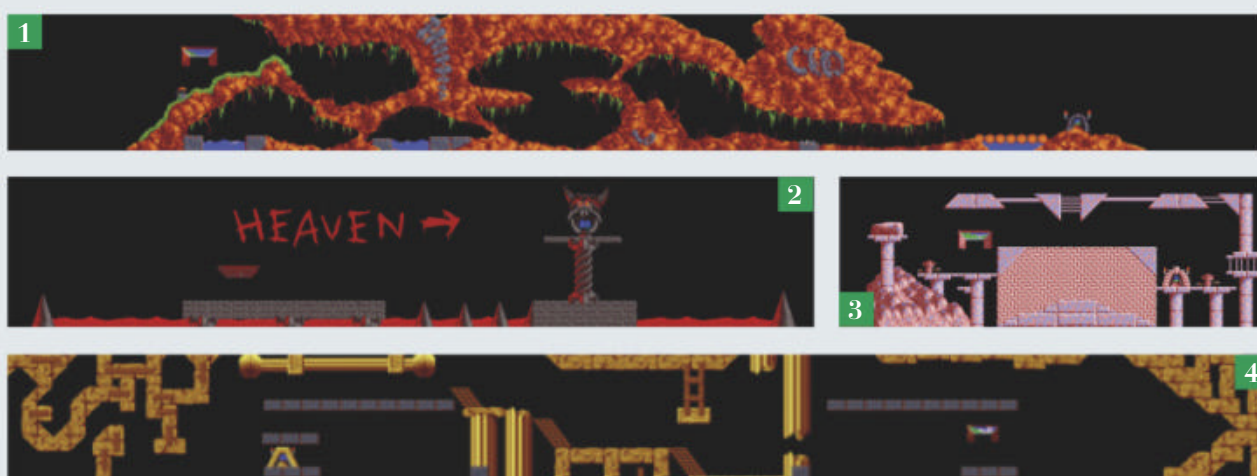
The game isn't that difficult to begin with, but mistakes are easily made. Perhaps you've forgotten to set one lemming as a blocker, in order to box in the horde while you send out a lone builder to bridge a gap. Perhaps you've forgotten that there are only so many of each skill to go around: you can't just make every last lemming a floater as they toddle off a cliff. Either way, any oversight transforms the level into a slaughterhouse line, with freshly

YOUR GOAL IS TO GET THEM THROUGH THIS SOUVENIR-STAND UNDERWORLD AGAINST THE CLOCK, BY ASSIGNING SKILLS

dropped lemmings dutifully repeating the errors of their siblings, death cries blending into a single, garbled scream. I'm aware there are worse ways to be introduced to the concept of dying, but try telling that to little infant Edwin, bawling his eyes out at the altar of a Macintosh Performa. Better yet, tell little infant Edwin that you can pick skills while the game is paused. Somehow I didn't work that out until 1999.

The other terrible thing that *Lemmings* teaches you is that certain deaths are necessary. Many levels only require you to save a certain percentage, and some lemmings are difficult to retrieve once they've performed their allotted tasks. Blockers, especially, are the most tragic of lemmings, unable to resume walking once deployed unless you send a digger to undermine them. The game's cruellest touch is that it requires you to kill any lemming that can't be saved – individually or, when time is short, care of a big old nuke button. Condemned lemmings don't go quietly into that good night. They shriek and clutch their skulls until they burst. DMA Design, of course, would go on to create *Grand Theft Auto* – a much bloodier game, but for my money, it's actually nowhere near as harrowing. ■

WHITE WILDERNESS *Four of the absolute worst Lemming's levels*



1 THE STEEL MINES OF KESSEL

Dig a path using the exploding lemmings but don't kill more than 90%, and make sure you blow up any blockers that you've left behind.

2 HEAVEN CAN WAIT

You don't have any blockers, so you'll need to trap your lemmings in a pit while creating the route. And do it all in just under two minutes.

3 JUST A MINUTE (PART TWO)

Sixty seconds of frantic wrangling with diggers, bashers, and climbers. You need to hold back the crowd but you also can't afford to dawdle.

4 SAVE ME!

You have to land a lemming on a ledge, then build a staircase and transform that lemming into a blocker, before the others walk off the edge to their deaths.

FOUND IN SPACE

How the terror and tenacity of **EVE ONLINE** changed my life. *By Steven Messner*

I'll never forget my first real fight against another player in *EVE Online* – it had taken me, a fresh-faced noobie at the time, almost a month to scrounge up the ISK to buy a beloved Catalyst destroyer, and now I was about to lose it fighting a player in a vastly more deadly assault frigate. As my shields evaporated in a single volley, I began shaking so severely from the adrenaline rush that I couldn't accurately use my mouse anymore.

Dying in *EVE Online* is intense. Unlike most other MMOs, where you can simply respawn with all your stuff and carry on with your quest, a destroyed ship is gone forever. That loss stings if you don't have the ISK to immediately purchase a replacement. But while I raged in the moment, those memories are some of the strongest I've had playing any PC game. It meant something to lose that ship. There were stakes beyond good and bad endings or plot twists triggered by dialogue choices. *EVE Online* was the first time I felt the consequences of my actions in a game. The emotional highs and lows that came as a result have defined not just how I think about PC games, but also my career.

SPACE TO GROW

So much of what I've come to love about PC gaming is present in *EVE Online*. It's complex and takes a lot of patience and persistence to understand. Players are given unparalleled freedom in deciding not only what they want to do, but how they fit into the greater *EVE* community, and it's a game that consistently rewards quick wits and clever strategising.

When I first started playing it back in 2012 on a 13-inch Macbook (forgive me), it was my first real

exposure to these kinds of PC games that just don't exist on consoles. I didn't know it at the time, but *EVE Online* was the beginning of my transformation into a PC gamer.

Though I had always played games on PC, like *World of Warcraft* and multiplayer shooters, *EVE* was a gateway drug that led me to *Mount and Blade* and *Path of Exile* – intimidating and hopelessly complex games that feel almost infinite in their scope. These are now some of my most-played games of all time.

But *EVE Online* is also the one game that got me to where I am today as a senior reporter. When I was 25 years old, I decided to make a wild pivot and chase my childhood dream of writing about videogames. And because I loved *EVE Online* and the wild space drama that erupts from it on an almost daily basis, I had a hunch other people might like those stories too. My first-ever pitch was to PC Gamer and it was about a band of ruthless murderers in *EVE*. My hunch was right, and my *EVE Online* articles helped establish me as a full-time freelance writer before joining PC Gamer. Since then, I've had the pleasure of writing about everything from *EVE Online*'s cunning pirates to how a scam turned into the game's greatest rescue mission. I've travelled to Iceland, Las Vegas, and Finland for these stories.

EVE Online is an MMO that transcends how I normally think about games and the people that play them. It's a weird alternate universe experienced only through the cockpit of ships that are typically only seen as small icons floating in space. But when those icons start shooting at each other, incredible stories of betrayal, loyalty and karma begin to materialise. I'm not being hyperbolic when I say living, hearing and telling those stories for the past decade has changed my life. ■



LIFE IN SPACE *Five career paths you can take in EVE Online*



PIRATE

Pros

- + An exciting life of crime
- + Fly fast, extremely powerful ships in small gangs
- + Can get rich if you rob a wealthy player

Cons

- Being a criminal makes you a big target
- Can go long stretches without a good ambush
- Good ships are expensive

SOLDIER

Pros

- + Get to fight alongside thousands of players
- + Ships losses are often reimbursed by your alliance
- + Easy to make friends with your teammates

Cons

- Battles sometimes last up to 16 hours or longer
- Bureaucracy can be annoying



MERCHANT

Pros

- + Can play whenever you want
- + Can become outrageously wealthy with some effort
- + Not many risks

Cons

- You'll definitely need to make a spreadsheet
- Kind of dull career
- You'll need to babysit market orders in order to beat out competition

WORMHOLER

Pros

- + Explore EVE's scariest, most dangerous regions of space
- + Often dragged into thrilling games of cat and mouse
- + Can work together in small groups and make big bucks

Cons

- Steep learning curve and extremely dangerous
- Always have to be paying attention to surroundings



EXPLORER

Pros

- + Solo-friendly but can still make a lot of money
- + Get to sneak into hostile territory and avoid players
- + Easy to get into

Cons

- Can go long stretches without making much money
- Have to be paying attention at all times to avoid enemy ambushes

SO MUCH OF WHAT
I'VE COME TO LOVE
ABOUT PC GAMING
IS PRESENT IN
EVE ONLINE

BUILD ME UP

The joys of creation and destruction in **SIMCITY 2000**.

By Chris Livingston

I don't think city-building games, despite the perspective of looking down on all the tiny people and making decisions that can bring them happiness or ruin their lives, really make me feel like a god. I usually feel more like a Peeping Tom mixed with an exasperated parent. I delight in just spying on my citizens to see what they're up to, and getting annoyed when they need something from me. "Fine, I'll build you a hospital! Now stop bloody complaining all of the time so I can get back to

blissfully squinting at all the little cars driving around."

SimCity 2000 was a revelation to me. I'd played the original *SimCity*, but *SimCity 2000* swapped from the top-down view and 2D graphics to an isometric perspective, which made my little cities feel absolutely alive and real. There was so much detail packed into its pixels, giving every tiny house and park and skyscraper its own personality. In a few days I'd know my virtual city's neighbourhoods and roads better than the one I actually lived in. After building an airport, I could happily

watch the teensy, tiny aeroplanes inching across the screen for hours. I always rushed to build seaports just so a little boat would appear in the waterways. It was like a live feed from a webcam pointed at a real metropolis, long before live webcams were even a thing. *SimCity 2000* was one of the first PC games to really sink its hooks into me, and I'd often eat dinner in front of the screen, not even playing but just observing.

And when I wasn't just staring at my city, there was so much to fiddle with. Taxes to increase when I ran into money troubles, underground views for laying down utility pipes and subway lines, and graphs showing various attributes of my city that... well, I probably never really understood all the graphs. But at least they were there if I wanted to look at them.

And there was just something so mesmerising about peering down at the little world I was building, seeing the cars on the roads I built obeying the little traffic lights, experimenting with city ordinances, watching the city slowly grow until it was so incredibly big I'd just about run out of room. And then I'd start a new one.

SMASH THE SYSTEM

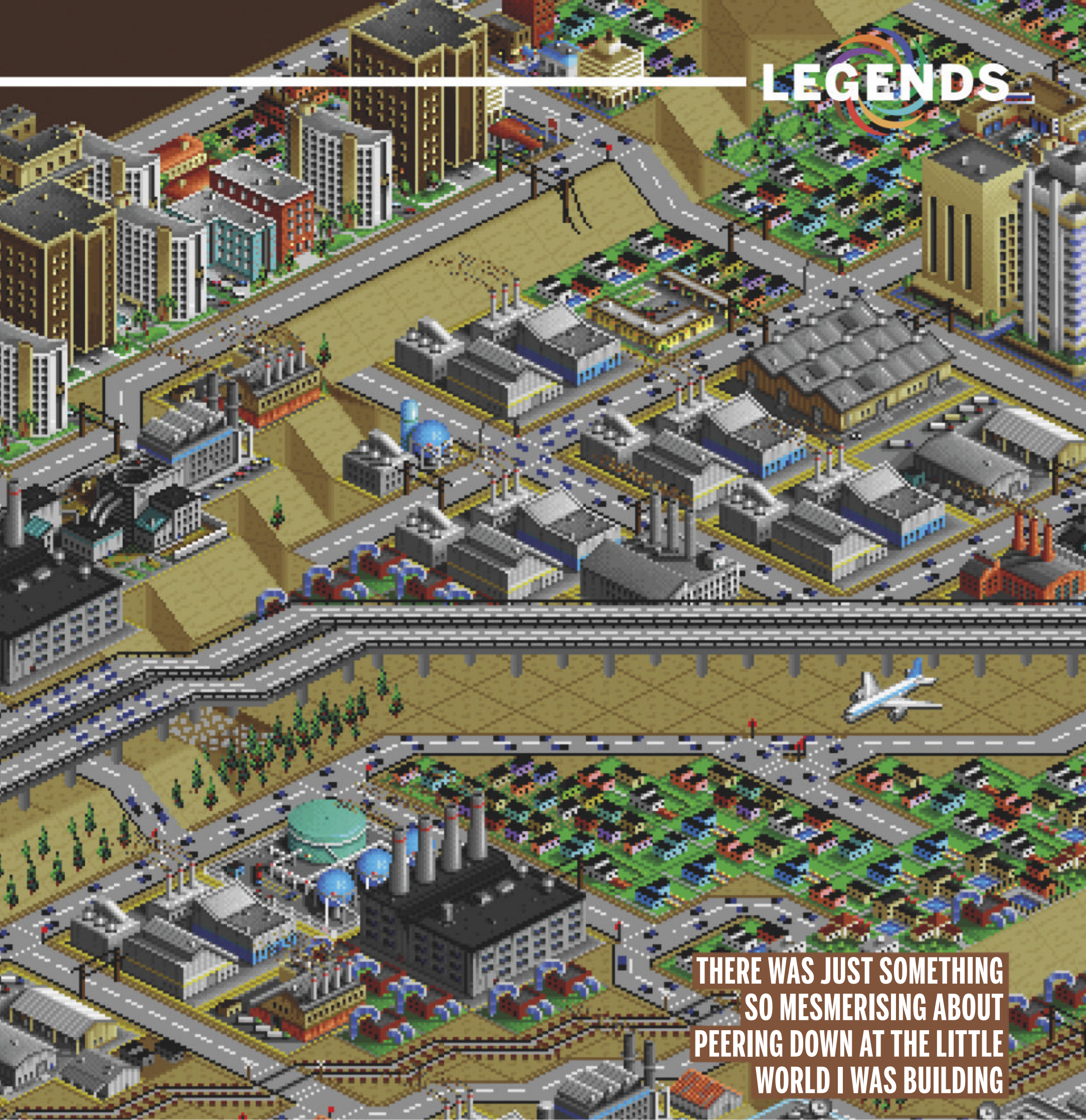
It was also extremely rare at the time: a game that had a beginning but no real ending, with no genuine win-state, or even a way to let you know if you should give up and start over or keep working on the city you had before you. It was open-ended, and you could build and manage your city indefinitely. Once I even left my game running overnight while I slept, just to see if it could sustain itself. I'm pretty sure it was in bad shape the next morning.

There was also the satisfaction that comes along with building something beautiful – knocking it down so I



LEFT: I wouldn't have a water shortage if you people would drink seawater.

RIGHT: I hate to raise taxes for the 75th time in a row. But I'm gonna.



**THERE WAS JUST SOMETHING
SO MESMERISING ABOUT
PEERING DOWN AT THE LITTLE
WORLD I WAS BUILDING**

SIM-OFFS *SimCity 2000's many spin-offs*



SIMCOPTER

Players could import *SimCity 2000* cities into the game and fly around in them – and it was the first time gibberish language Simlish was used.



STREETS OF SIMCITY

Similar to *SimCopter*, but for cars: you could drive around in your *SimCity 2000* cities. You could also, weirdly, have car-based deathmatches with friends.



SIMHEALTH

A game simulating then-President Bill Clinton's healthcare reform policies. Ironically, perhaps, it was DOA, because who wants to simulate that?

could try to rebuild it again. Disasters could occur, with anything from earthquakes to plane crashes to alien attacks, but I could launch them myself, too, if I wanted a little extra challenge or if my city was humming along so nicely I'd just gotten a bit bored. That's the danger of including a disaster menu at the top of the screen. It's impossible not to click on it once in a while. Boom. There's a flood or tornado or a nuclear accident. Hmm, maybe city builder games do make me feel like some sort of god after all, and not a very nice one at that. ■

BROUGHT 2 LIFE

How **LEFT 4 DEAD** cured a toxic LAN environment.

By James Davenport

Left 4 Dead represented a turning point in how I socialise through games. In 2008, LAN parties were still around and I had a good group I'd play games with at my old IT gig at the University of Montana. We'd take over the office after-hours and run through a list of custom *Warcraft III* games (a lot of the original *DotA* before I realised what a mistake I was making), some *Quake* and *Unreal*, *Counter-Strike* and the like. The common thread: all competitive. Worse, so was everyone in the room. Things got heated, and after a lifetime of football and wrestling coaches teaching me how to boil blood, I shut down the moment someone took a game too seriously. I still do.

Left 4 Dead changed the mood completely. We went in on a few of those early four-packs and spread

them around. No one was particularly excited about *Left 4 Dead*, but it was a Valve game so we had to give it a go. We didn't play anything else for the whole semester.

We started inviting more people to game nights because working together to survive a zombie apocalypse was a far more appealing activity than getting wiped by Mike in every game ever. Enough people of varying skill levels would show up to get a few groups going, each dancing with the AI director at their own lovely rhythm, bouncing between despair and hope. The screaming in the office shifted from anger to a chorus of yelping barely discernible as calls for help and ensuing thank-yous. Rather than end each session deflated, saying nothing and shambling off to our dorms, we'd stick around or walk somewhere together, maybe get food, breaking down a dramatic standoff at Dead Air's refuelling finale, or how



LEFT: All these zombies could use a hug and some words of affirmation.



THE DINGY BASEMENT IT
OFFICE LIT UP WITH
WHOOPING AND BACK
CLAPS LIKE A DAMN
MEAD HALL

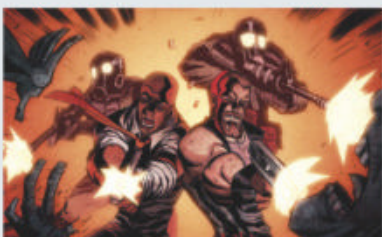
BELOW: Not what you wanna see when you're on your lonesome.

BOTTOM: A collective 'oooooh' from the room with every pipe bomb.



LORE 4 READ

Some of the best comics based on Valve's excellent games



L4D
The Sacrifice, a story that ties *L4D* and its sequel together.

l4d.com/comic



TEAM FORTRESS 2
Read the catch-up then check out Ring of Fired.

teamfortress.com/comics



PORTAL
Lab Rat tells the story of a man living in the walls of Aperture Science.

thinkwithportals.com/comic

basement IT office lit up with whooping and back claps like a damn mead hall. God I miss it.

LAN 4 DEAD

It's odd, seeing the LAN culture fade so quickly after one of the best LAN games I'd ever played was released. Forces beyond our little IT office's control, I suppose. But it's OK. Sometimes we'll manage to get a fragment of the group together for some modded nightmare run of a custom *L4D2* level, Teletubby hordes chasing us through Mario's palace or something else normal like that. And with *Back 4 Blood* on the horizon, old text threads are creaking back into

everything nearly went to shit in Blood Harvest's cornfield sprint.

After mastering the campaigns, we entertained the idea of trying out the versus mode and, yeah, that had me worried. See above. Yelling. Fragility. I tensed up at the thought, but *Left 4 Dead's* versus mode never dipped back into that volatile competitive mood. Coordinating the

perfect Smoker pull and Hunter pin combo to split up the survivors always carried more of a pranking-your-pals energy than any spectre-of-my-disappointed-dad vibes. Versus was cunning and playful, hewing closer to hide-and-seek than the pure reflex-driven play of most competitive shooters. We stayed jubilant and friendly. The dingy

motion. I wonder if we'd be so adamant about keeping in touch if we kept playing *Quake* and *DotA*, pissing the bed with every bad game. Would I even lament the slow death of LAN, or would it be a relief to me?

Left 4 Dead made finding positive social connections in games a guiding principle for me, something I take into consideration with every multiplayer experience. Some genre fiction paved an avenue for amazing friendships. How great is that? And, yeah, we'll never be in the same room together again, but that's OK. A lobby's a lobby. ■

THE GREATEST INFLUENCER

PC gaming would look very different without **CIVILIZATION**. By Fraser Brown

I have no idea where we'd be without Sid Meier's *Civilization*. Its influence has been an overwhelming constant for decades, defining generations of strategy games and developers. If Sid Meier and Bruce Shelley hadn't decided to let Napoleon, Montezuma, and Alexander the Great duke it out, swallowing up the world and dropping nukes on each other, a huge chunk of gaming history would never have happened.

Turn-based strategy existed long before *Civ*, but it's *Civ*'s brand of turn-based strategy that became the model that most of the genre ended up following. It's not just 4X games that owe almost everything to *Civ*. You can't help but stumble across its DNA everywhere, whether you're playing *Crusader Kings*, *Total War*, or *Age of Empires*, which dreamed of being a real-time *Civ*.

It just kept setting the standard, over and over, with each new release. Wherever you are in the gaming timeline, there's a good *Civ* to play. Throughout almost my entire life, *Civ*'s been there, beckoning me to take one more turn. And it's always recognisable. You always know what you're getting with *Civ*. That doesn't mean it's immune to changes, and

each team has left their own mark on the series, but it always maintains that comforting familiarity.

Meier's name is still in the title and he continues to oversee the series to this day, which is why it can be hard to separate the individual games from *Civ*'s long history. But it's not just Meier's legacy. Every single *Civ* has its own designer, and the team has changed over the years. Huge shifts have occurred due to their vision. And then each new designer builds on it, so that they're adding to this collaboration that's been going on for longer than a lot of its players have been alive.

TIME PORTAL

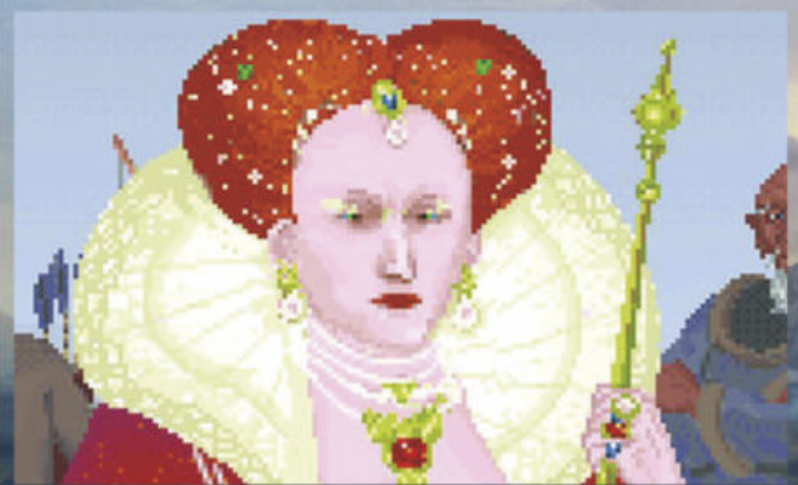
When you're playing *Civ VI*, you're also playing every *Civ* that came before it, and through all the changes that original design philosophy is still apparent. A focus on exploration and discovery has been with the series from the start, highlighting the achievements of humanity and not just the conflicts, and letting you win the game not just through conquest but by leaving Earth and travelling to the stars. It's ultimately an optimistic series, and that optimism proved to be infectious. Even *Total War*, a series all about huge armies colliding, lets you go down the diplomatic route, conquering the world by making massive alliances.

Civ might seem conservative 30 years on, but in 1991 it seemed wildly ambitious. Meier and Shelley's previous game was *Railroad Tycoon*, and the leap from managing a railroad company to being the immortal ruler of a global empire was pretty big. "We were young, and we had no fear," Meier told me in an interview a few years ago. It was an experiment. Things like using squares instead of hexes and making it turn-based instead of real-time weren't made right away, instead being born out of a desire to make this complex game more accessible.

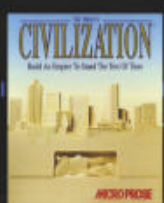
Would I recommend the first game now? Maybe if you want a trip back through gaming's past. But you could instead play the much flashier *Civ VI*. Or, if you prefer squares over hexes, you can't go wrong with some *Civ IV*. And you'll still see what Meier, Shelley and Microprose were trying to create in 1991. Other developers are still trying to find their own *Civs*, like Mohawk Games' *Old World* and Amplitude's *Humankind*. At this point, the only way *Civ* will vanish is if actual human civilisation perishes. ■

BELOW: Maps were a bit simpler back in 1991.

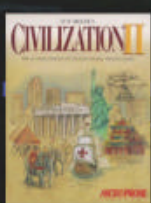
BOTTOM: Your majesty, please don't nuke us.



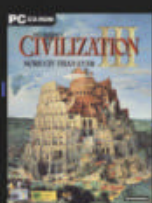
A BRIEF HISTORY OF CIVILIZATION 30 years of wonders and wars



CIVILIZATION
1991
The one that started it all.



CIVILIZATION II
1996
The one with the animated emissaries.



CIVILIZATION III
2001
The cultured one.



CIVILIZATION IV
2005
Civilization: The Next Generation.



CIVILIZATION V
2010
The rebel that introduced hexes.



CIVILIZATION VI
2016
The one that made cities huge.

**WHEN YOU'RE
PLAYING CIV VI,
YOU'RE ALSO
PLAYING EVERY CIV
THAT CAME BEFORE IT**



ABOVE: Even in a fantasy world, TVs in the '90s were bulky.

LEFT: The ugly clothing patterns probably looked better on a CRT display (but not much).

RIGHT: The UFO prop got a lot of use in my productions.

HOLLYWOOD DREAMS

Pretending to be Pixar in **3D MOVIE MAKER**, Microsoft's weird 1995 animation studio for kids. *By Tyler Wilde*

Today's PC gamers are constantly feeding YouTube and Twitch with game footage, but back in 1995, capturing our screens was hardly thought of. Though even then there existed seeds of 2000s machinima. One such seed was 3D Movie Maker, a program that empowered kids to spend afternoons animating car crashes and alien abductions. It's one of Microsoft's best bits of '90s software, recognising the potential for real-time 3D rendering as a creative tool. It's also bizarre.

There was an idea back in the '90s that modern software should map its functions onto the most obvious metaphors possible. In Microsoft Bob, for instance, programs were organised into the rooms of a house. PC Gamer's '90s demo discs similarly featured adventure game-style interfaces. These virtual spaces couldn't have boring old tutorials – Turing and Asimov promised artificial intelligence, not tooltips – so they were augmented with chatty characters such as a cartoon dog, our own Coconut Monkey, and the infamous Clippy from Microsoft

Office. 3D Movie Maker had a guide, too, but since it was for kids and this was the '90s, he was a horrible blue guy with goat pupils that ran perpendicular to each other. He was a real nightmare, McZee.

McZee's antics – riding a shopping cart down roller coaster tracks, turning into a slice of cheesecake – illustrate why the '90s holds such a monopoly on the words 'wacky' and 'zany'. He guided users around a movie studio, finally leading to the interface where you could make your own movies with props and characters as garish as he was. The models were clearly influenced by American cartoons of the time, such as Rugrats and Rocko's Modern Life, and that was good enough for ten-year-old me. (A Nickelodeon-themed version of the software released in 1996.)

MOVIE MAGIC

If I knew nothing of 3D Movie Maker and you asked me to imagine what a 3D animation program for kids might have been like in 1995, I'd probably assume that it was a proto-*Garry's Mod* disaster with impossible controls. On the contrary, this was a brilliant piece of software. It

simplified 3D animation such that kids could create surprisingly sophisticated scenes and even their own audio if they had a microphone.

To animate a character walking, you would add the character to the scene, select the walking action, and then click and drag them along the floor to record a path. You could then scrub back to the start of the scene and do the same to another character or prop, layering the movie with animations. It was in 3D Movie Maker that I first got a sense of what a digital animation and video editing timeline was, which I'd carry into the embarrassingly bad games I made with Adobe Flash, the software used for so much vector animation in the late '90s and 2000s.

Once you made a video in 3D Movie Maker, there wasn't much to

ONCE YOU MADE A VIDEO IN 3D MOVIE MAKER, THERE WASN'T MUCH TO DO WITH IT OTHER THAN SHOW YOUR FAMILY AND FRIENDS



do with it other than show your family and friends. It was a toy, more or less, but also a peek at the future. At the time, we were still crudely editing home movies with dual-deck VCRs (MiniDV was a new format), but it was becoming clear that personal computers were one day going to put amateur creators – filmmakers, animators, musicians, game designers – on the same playing field as professionals. 3D Movie Maker wasn't a game itself, per se, but it was a vision of entertainment software as a creative tool, as opposed to a one-way fun pipe, and that is very PC gaming. ■



BREAKOUT ROLES

3D Movie Maker featured some big debuts



G-MAN
McZee's voice actor, Michael Shapiro, went on to play Gordon Freeman's employer in *Half-Life*.



COMIC SANS
Comic Sans debuted in 3D Movie Maker. It was actually designed for Microsoft Bob, but wasn't ready in time.



BONGO
Bongo is 3D Movie Maker's most recognisable actor, having appeared in the demo version.

CROWN JEWEL

CONQUESTS OF CAMELOT proved Sierra adventure games could grow beyond goofy parody. *By Wes Fenlon*

Conquests of Camelot introduced me to the merciless difficulty of old Sierra point-and-click adventures just a few minutes in. As King Arthur, I filled my purse with coin in preparation for a long journey to find the Holy Grail, picked up a magical lodestone from Merlin to guide me, and gave Guinevere a kiss before heading out the gates of Camelot – or trying to. The castle gate fell onto my head as I rode under it, crushing me to death.

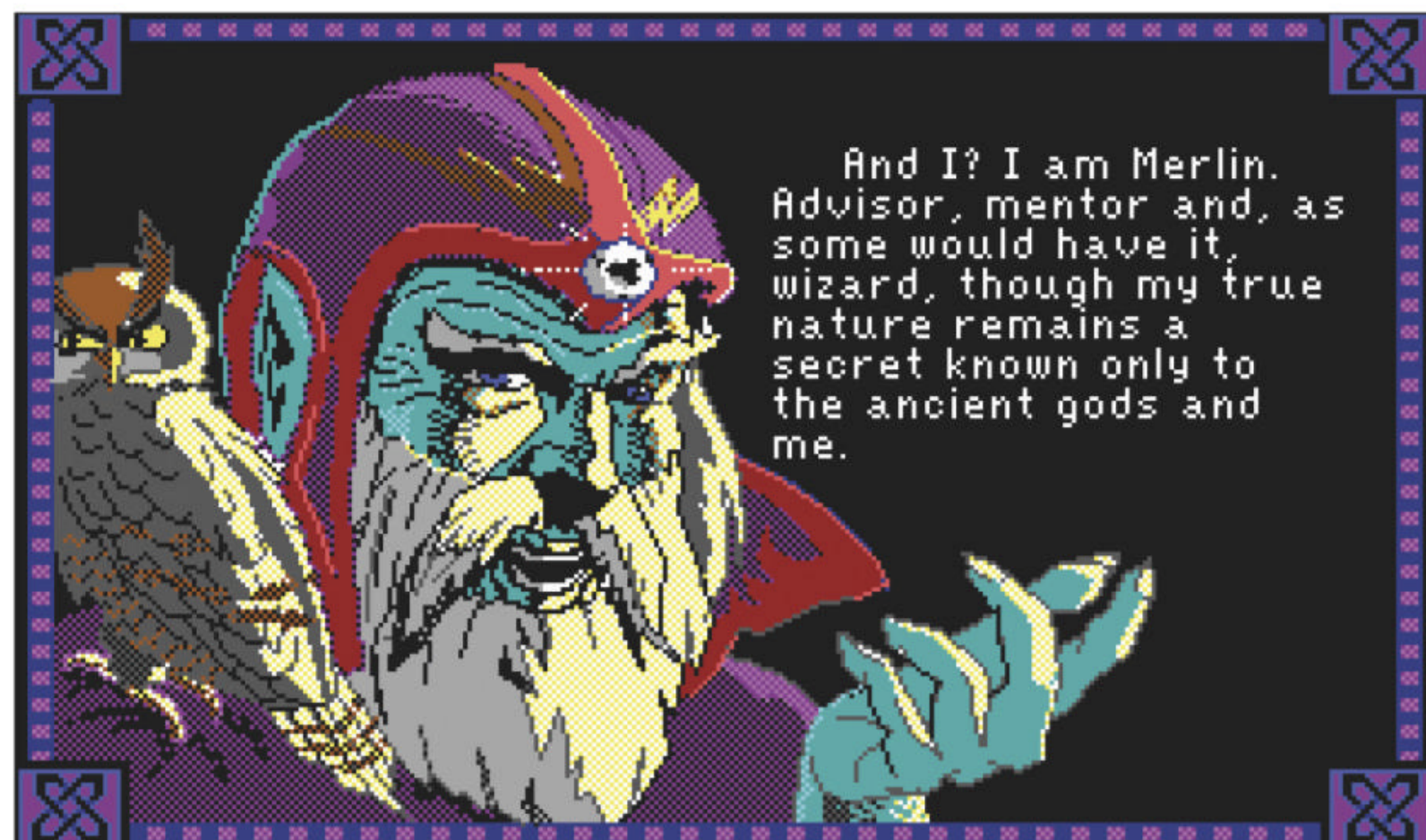
“It is terribly unwise to start a sacred mission without the blessings of the gods,” *Conquests of Camelot* admonished. Later I’d be gored by a wild boar, skewered on the lance of the Black Knight, and fall through thin ice, freezing to death. As in most of Sierra’s adventure games, surviving to see the end of *Conquests of*

Camelot was a real challenge. Its puzzles were beyond my ten-year-old brain, but I didn’t care – getting to be King Arthur made *Conquests of Camelot* as mystical an object to me as the Grail itself.

A BUSY LIFE IN CAMELOT

By the late ’80s Sierra had expanded beyond *King’s Quest* and *Space Quest* to other adventure series like *Leisure Suit Larry* and *Police Quest*, but this game felt like a step towards maturity. Sierra hired Christy Marx, head writer of the cartoon *Jem* and the *Holograms*, who had no experience designing games but a long list of cartoons and comics behind her. Undaunted by that inexperience, Marx threw herself into research and wrote a game that even today feels unusually rich and devoted to its source material.

As a kid this seemed like the definitive Arthur story to me, an



LEFT: Is this the most badass Merlin has ever looked?



IT AMBITIOUSLY TRIED
TO CAPTURE EVERYTHING
THAT WOULD GO INTO
A CLASSIC
ARTHURIAN QUEST



CONQUESTS OF THE LONGBOW



A year after *Camelot*, Christy Marx wrote and directed a follow-up adventure about Robin Hood and his merry men. *Longbow* was widely

praised as an even better game. It smoothed over some of *Camelot*'s flaws, like its action scenes, trading them for less-clunky archery. Most notable, though, was the new art direction. *Camelot* was criticised in 1990 for looking dated compared to other contemporary adventures. *Longbow*, released just a year later in 1991, is both more detailed and more expressionist. Other than the low resolution, the art still looks great today.



adventure to get lost in once I'd worn out my tape of Disney's *The Sword in the Stone*. I didn't read *The Once and Future King* until years later, so *Conquests of Camelot* was my main introduction to knights Gawain and Lancelot and the legend of the Grail. Marx's writing has a classical flavour to it, more approachable than TH White's novel but still steeped in a bit of Ye Olde English. It's not tedious like *Police Quest* or as silly as most of Sierra's other adventures but still has a wry streak, like the text parser asking "Your bidding, M'Lord".

Conquests of Camelot ambitiously tried to capture everything that would go into a classic Arthurian quest, including a jousting contest, a sword fight against a mighty Saracen, and magic riddles. The action scenes were as clunky and frustrating as you'd expect from an adventure game in 1990, but I didn't know any better at the time – and neither did Sierra, really, which had only released one game in the *Quest for Glory* series at that point.

Thirty years later *Conquests of Camelot* may look rudimentary, and it sadly never got a VGA upgrade like many of Sierra's other early adventures. But it was one of my most formative PC gaming experiences, and not just because it taught me to save constantly. My dad and I played it together, and for me it ignited a passion for games with storytelling and puzzles before I understood adventure games were a defined genre. Years later, when he upgraded the family PC to a Pentium, I got an IBM 486 of my very own and spent hours playing LucasArts adventures like *Sam & Max* and *Indiana Jones & the Fate of Atlantis*.

Camelot also taught me that people went onto the internet and wrote FAQs with the answers to puzzles I could never solve myself. I printed out a guide and followed it to lead Arthur through Jerusalem and, at long last, claim the Holy Grail. The lesson about prayer didn't stick, though. I'm still a heathen – I just know not to trust castle gates. ■

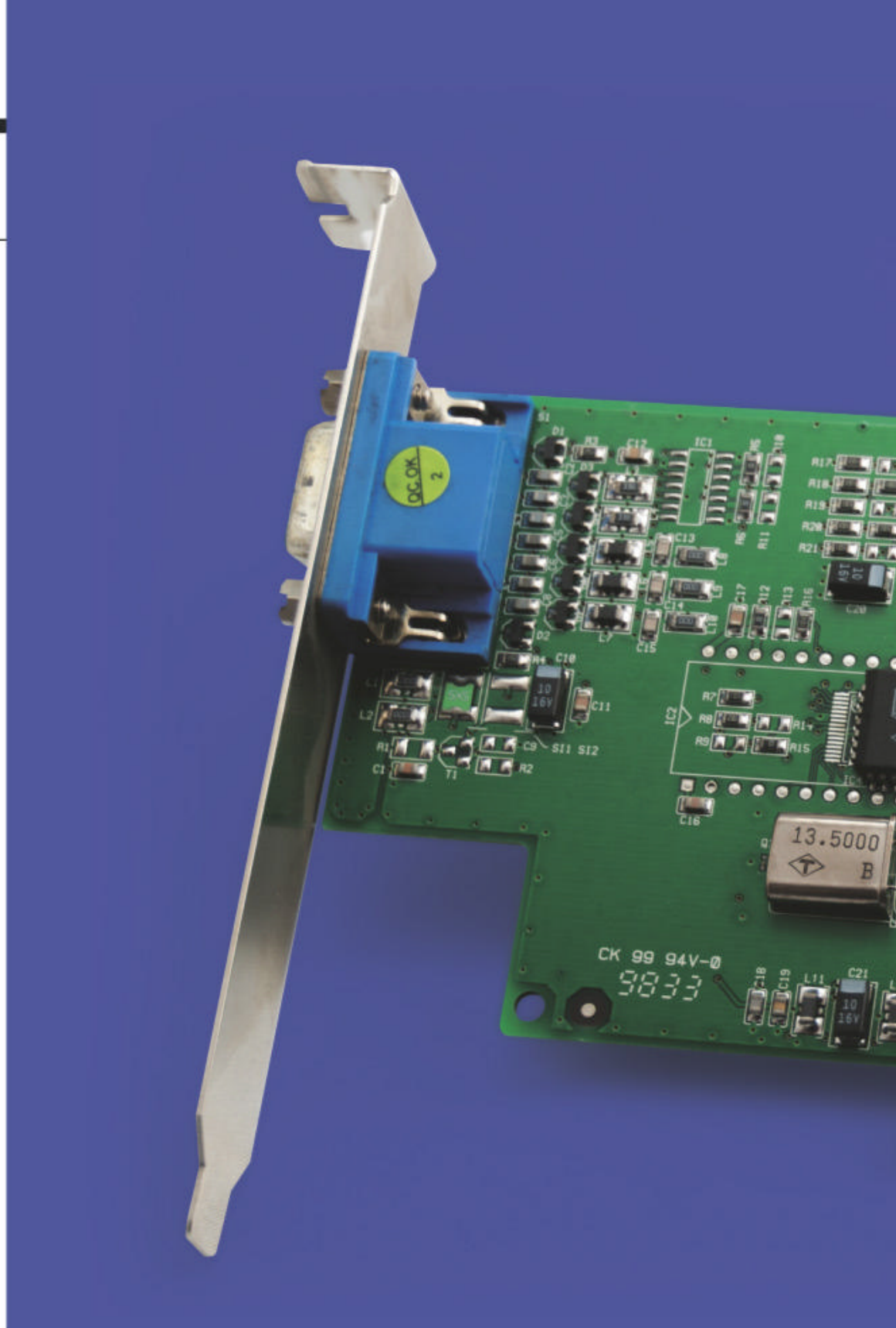
TOP: Wonder how Lancelot got into this predicament...

PIXEL PUSHERS PAST

The graphics cards that helped define PC gaming. *By Jacob Ridley*

It's easy to forget about where we came from in PC gaming, especially when we're arguing over gigabytes of memory and teraflops of performance. But there's actually a lot that we can glean from the annals of GPU history – the colossal leaps in power that GPUs have taken in under 25 years goes some way to explaining why today's top graphics card costs \$1,499.

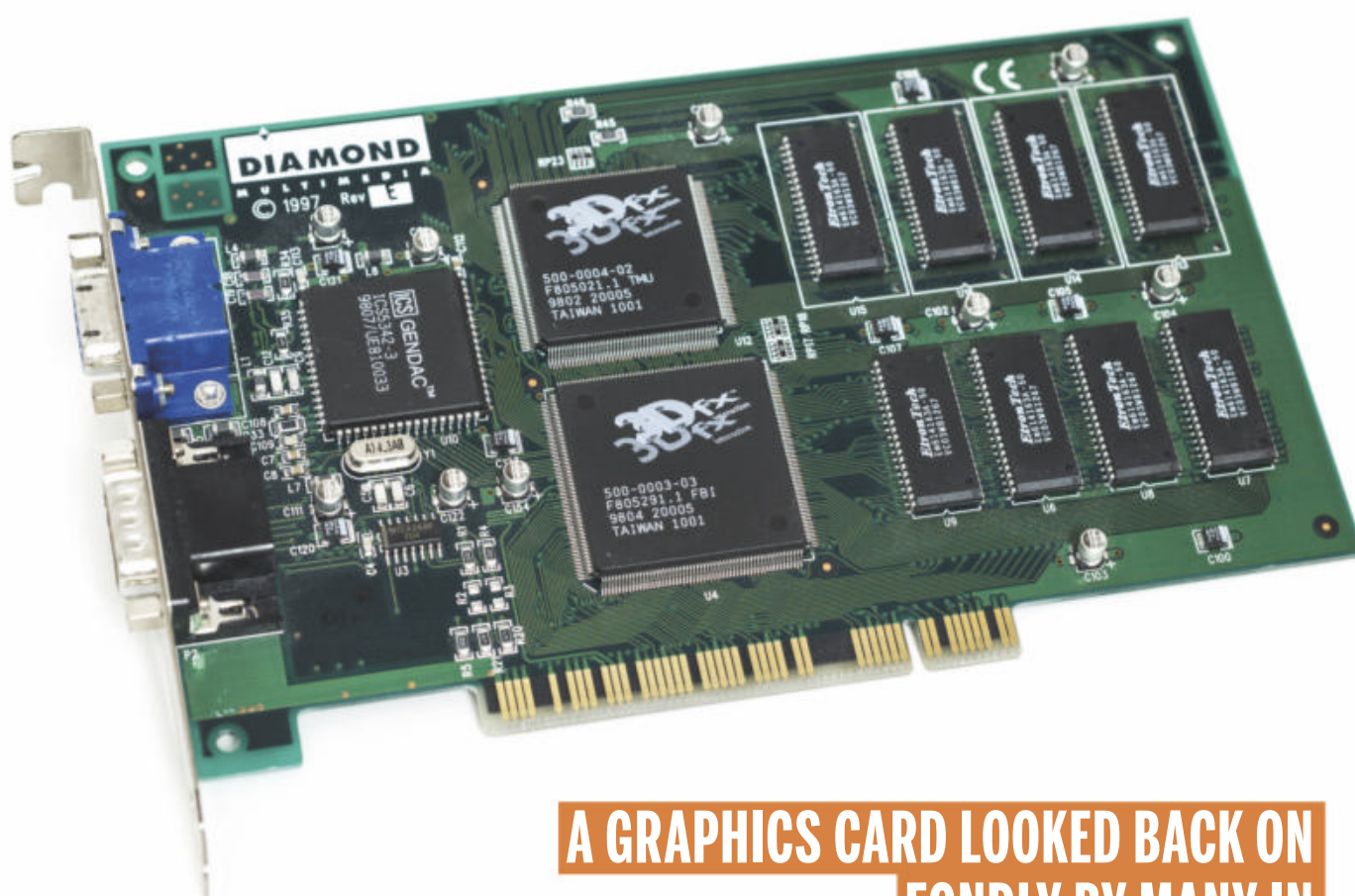
You have to walk before you can run, and there were many attempts to nail an image resolution of just 800x600 before anyone could dream up the pixel count required for the latest games at 4K. Yet you'd also be surprised by just how many features so prevalent in modern GPUs were first introduced back at the dawn of the industry. But let's start right at the beginning – when active cooling was optional and there were chips aplenty.



3dfx Voodoo

1 It's March, 1996 – England is knocked out of the Cricket World Cup by Sri Lanka, a young boy celebrates his fourth birthday (that's me), and 3dfx releases the first of what would be a couple of game-changing graphics cards: the Voodoo. It's a graphics card looked back on fondly by many in the PCPP office. Clocked at just 50MHz and fitted with a whopping 4/6MB of total RAM, the Voodoo was clearly the superior card for 3D acceleration at the time. The top spec could handle an 800x600 resolution, but the lower spec was capable of only 640x480. Despite its 2D limitations, it would prove a highly successful venture, and set 3dfx on a trajectory into PC gaming fame.

Note: the 3dfx Voodoo is often referred to as the Voodoo1, although that name only caught on after the release of the Voodoo2.



**A GRAPHICS CARD LOOKED BACK ON
FONDLY BY MANY IN
THE PCPP OFFICE**

INFO YEAR: 1996 / **CLOCK SPEED:** 50MHZ / **MEMORY:** 4/6MB /
PROCESS NODE: 500NM



Nvidia Riva 128

2 A chipset company by the name of Nvidia would soon offer competition to the 3dfx in the form of the Nvidia Riva 128, or NV3. The name stood for 'Real-time Interactive Video and Animation', and it integrated both 2D and 3D acceleration into a single chip. It was a surprisingly decent card following the Nvidia NV1, which had tried (and failed) to introduce quadratic texture mapping.

This 3D accelerator doubled the initial spec of the Voodoo1 at 100MHz core/memory clock, and came with a half-decent 4MB SGRAM. It was the first to really gain traction in the market for Nvidia, and if you take a look at its various layouts – memory surrounding a single central chip – you can almost make out the beginnings of a long line of GeForce cards, all of which follow suit.

But while it offered competition to 3dfx's Voodoo1, and higher resolutions, it wasn't free of its own bugbears – and neither would it be alone in the market for long before a 3dfx issued a response in the Voodoo2.

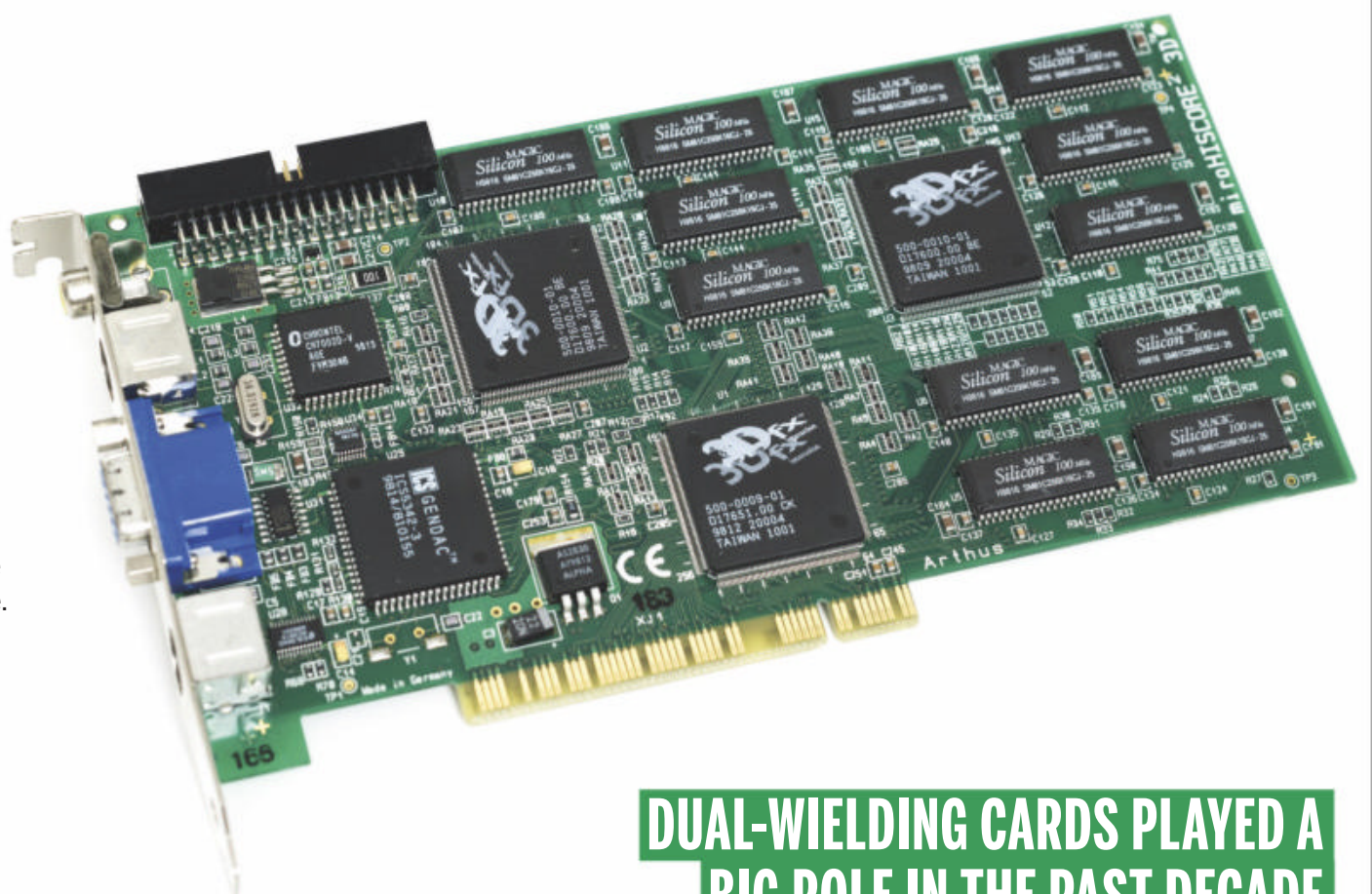
INFO YEAR: 1997 / **CLOCK SPEED:** 100MHZ / **MEMORY:** 4MB / **PROCESS NODE:** SGS 350NM

3dfx Voodoo2

3 Now this is a 3D accelerator that requires no introduction. Known far and wide for its superb performance at the time, the Voodoo2 is famed for its lasting impact on the GPU market, great frame rates, and continued use of a multi-chip design. A smorgasbord of chips, the Voodoo2 featured a 90MHz core/memory clock, 8/12MB of RAM, and – once connected via a port on twinned cards – the Voodoo2 could even support resolutions up to 1024x768.

Dual-wielding cards played a big role in the past decade of GPU performance. It was possible for a PC user to connect two cards together for better performance back in 1998 – and it was worth doing, too. 3dfx managed to stay on top with the Voodoo2 for some time, but it wasn't long until it would make a few poor decisions and be out of the graphics game entirely.

INFO YEAR: 1998 / **CORE CLOCK SPEED:** 90MHZ / **MEMORY:** 8/12MB / **PROCESS NODE:** 350NM



DUAL-WIELDING CARDS PLAYED A BIG ROLE IN THE PAST DECADE OF GPU PERFORMANCE

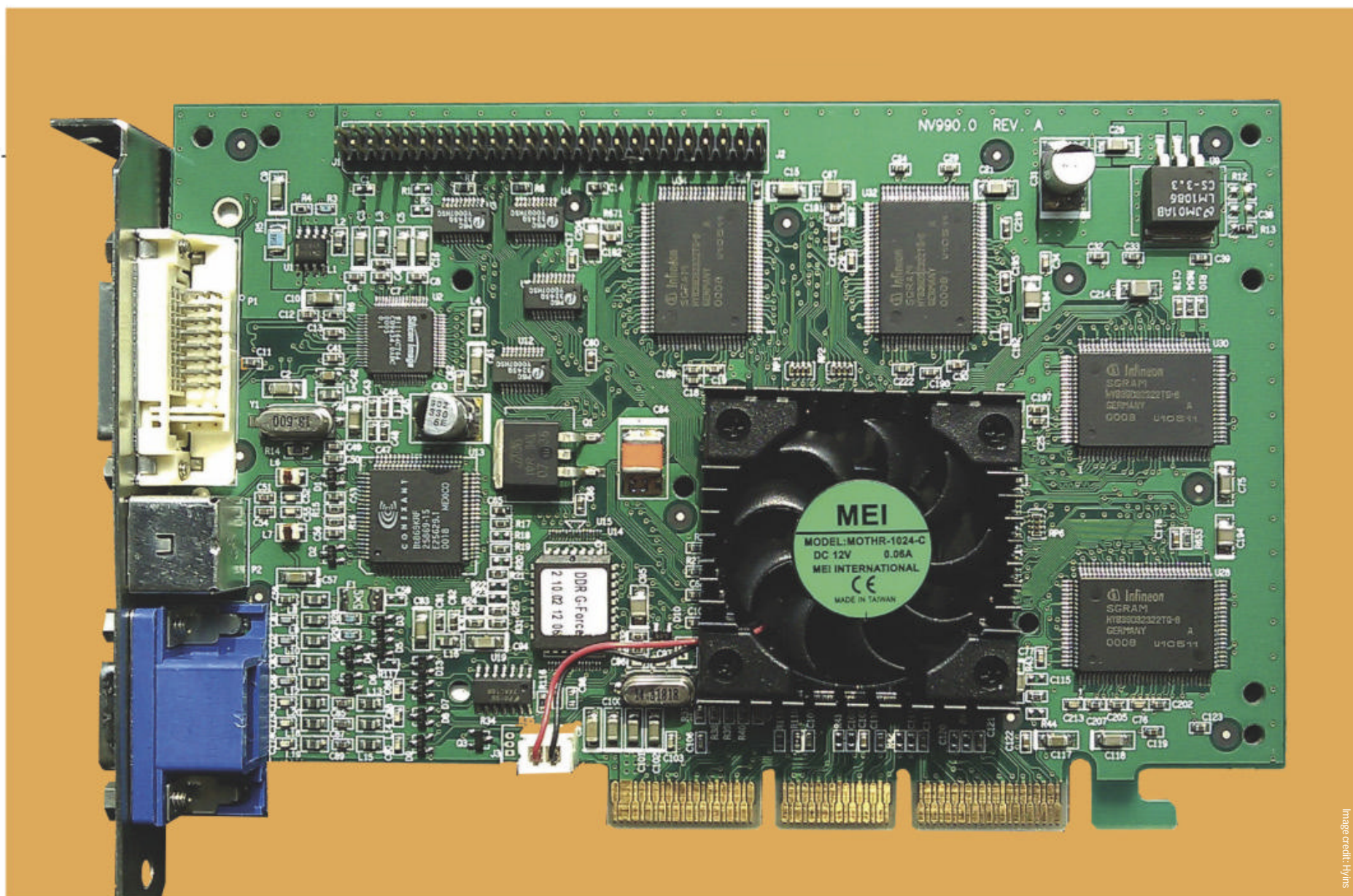


Image credit: Hyms

Nvidia GeForce 256

4 The first bearing the GeForce name still in use today, the GeForce 256 was also the 'world's first GPU'. "But what about the Voodoos and the Rivas?" I hear you ask. Clever marketing on Nvidia's part has the GeForce 256 stuck firmly in everyone's minds as the progenitor of modern graphics cards, but it was really just the name Nvidia gave its single-chip solution: a graphics processing unit, or GPU.

As you can probably tell, this sort of grandiose name, a near-parallel to the central processing unit (CPU) raking in cash since the '70s, was welcomed across the industry.

That's not to say the GeForce 256 wasn't a worthy namesake, either. Integrating acceleration for transform and lighting into the newly-minted GPU, alongside a 120MHz clock speed and 32MB of DDR memory (for the high-end variant). It also fully-supported Direct3D 7, which would allow it to enjoy a long lifetime powering some of the best classic PC games released at that time.

INFO YEAR: 1999 / **CORE CLOCK SPEED:** 120MHZ / **MEMORY:** 32MB DDR / **PROCESS NODE:** TSMC 220NM



Nvidia GeForce 8800 GTX

5 Once Nvidia rolled out the GeForce 8800 GTX, there was no looking back. Precursor to ultra-high-end, enthusiast graphics cards, such as the RTX 3090, if you want to talk about a card that really got peoples' attention it's the GeForce 8800 GTX. Launched back in 2006 to much fanfare, the 8800 GTX was the largest GPU ever built at the time. With 128 Tesla cores inside the G80 GPU, and 768MB of GDDR3 memory, the

8800 isn't an unfamiliar sight for a modern GPU shopper. It bears the marks of many a modern GPU – even if it might be a little underpowered by today's standards. Despite a pre-launch recall threatening to scupper the 8800 GTX launch plans, this graphics card ruled over the GPU market at launch and even stuck around for some time afterwards thanks to a unified shader model, which was introduced with the architecture alongside Direct3D 10.

INFO YEAR: 2006 / **CORE CLOCK SPEED:** 575MHZ / **MEMORY:** 768MB GDDR3 / **TRANSISTORS:** 681MILLION / **PROCESS NODE:** TSMC 90NM



ATI Radeon HD 5970

6 And what's AMD been doing all this time? Semiconductor company ATI was busy building heaps of console chips right the way through the '90s and early '00s, and made some excellent GPUs in its own right, such as the X1900 XTX. It was later purchased by AMD in 2006. After the abortive HD 2000 and 3000 series, the HD 4870 and 4850 were quality cards, but the one that made the biggest splash after the move was the Radeon HD 5970. The HD 5970 was essentially a large Cypress GPU, 1,024MB pool of memory, and a sizeable 256-bit memory bus... multiplied by two.

This twin-GPU tradition continued right the way up to the AMD Radeon R9 295X2 and the Nvidia Titan Z. But once multi-GPU support started dwindling, solo cards became the predominant form factor. And with multi-GPU support in the developer's court due to the introduction of DirectX 12, they may never return.

SPECS YEAR: 2009 / **CORE CLOCK SPEED:** 725MHZ / **MEMORY:** 2,048MB GDDR5 / **TRANSISTORS:** 4,308 MILLION / **PROCESS NODE:** 40NM

THE ONE THAT MADE THE BIGGEST SPLASH AFTER THE MOVE WAS THE RADEON HD 5970

Dave's fave from the grave

NVIDIA 8800 GT

Dave James: I've gamed on more graphics cards than I can remember. My first Voodoo2 was transformative, the Riva TNT was ace, and I've since had twin Titans and dual-GPU Radeon cards in my home rigs, but none hold so dear a place in my heart as the 8800 GT. Forget the 8800 GTX, the GT combined stellar performance, great looks, and incredible value. I've still got my single-slot, jet-black reference card – the very same one photographed here – and will never part with it.



REVIEW

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Games

YOUR GUIDE TO THE LATEST PC GAMES.

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SCORING SYSTEM

PCPP scores its games on a 1 to 100 scale. The higher, the better – though 100 is by no means a “perfect” game. We’re not convinced such a thing exists, so consider a 100 a masterpiece of PC gaming, despite its inevitable flaws. A 50 is a decidedly average game; one that doesn’t excel in any particular area, without being an affront to our senses – the ultimate in mediocrity. Below this, you’ll start to find the games our reviewers suffered an aneurysm getting through; above it, the titles truly worth your time and money. And remember: a score is only a vague indication of quality. Always read the full review for the definitive opinion!

POWERED BY



FAKE FRIENDS

PERSONA 5 STRIKERS reunites the gang for a bland road trip. *By James Davenport*

This spin-off has all the style and confidence of *Persona 5*, plastered with bold colours and glittery character animations that give each scene the liveliness of a manga panel, down to the menus. A smooth, jazzy soundtrack establishes a psychedelic '70s spy movie energy, even though we're dealing with teens taking on criminals throughout Japan. There's even a 30-hour story with most of the original cast returning. It walks and talks almost exactly like *Persona 5*, a game that isn't even on PC yet.

But *Strikers* isn't *Persona 5*, and the comparison isn't flattering for it. Its social elements and combat aren't as fully-featured or its characters as deeply considered as *Persona 5*'s, so any expectation of parity will lead to disappointment. *Strikers* is a wild but bloated visual novel with almost no room for expression or choice, and with some of the best turn-based combat in existence swapped out for repetitive action game combat. *Strikers* will give *Persona 5* fans some painful whiplash.

In *Persona 5 Strikers* you return as the same nameless high-school student and reunite with the Phantom Thieves, your group of friends that faced down the invisible psychic threats plaguing the Metaverse in *Persona 5*. It sounds complex, but the *Persona* series just dresses up social and cultural issues in surreal fantasy garb. People fight one another with physical manifestations of their psyche, which basically makes it a game of surreal *Pokémon*. I choose you, weird sewer

monster shaped like a penis, also why are you crying?! And so on.

The big bads have shifted from greedy adults to the more intangible effect of social media on young people, with villains building massive dungeons out of ego, from Hot Topic-infused nightmare amusement parks to goofy fantasy castles ripped from the pages of contrived young-adult literature. These scenes, split

between a real-world road trip through Japan, make *Strikers* sound like the ideal side story, a special summer reunion episode. And the story is fine, it's just missing *Persona 5*'s special ingredient.

GHOST TRICKS

In *Persona 5*, the social simulation was the heart of the game. Going to school, plotting out who I'll hang with afterwards, paying attention to what my friends like and what their problems are so when the time arises I know the right thing to say – my schedule, set against the ticking clock, created the tension and forced me to

I choose you, weird sewer monster shaped like a penis

NEED TO KNOW

WHAT IS IT?
An action game sorta-sequel to *Persona 5*

DEVELOPER
Omega Force / P-Studio

PUBLISHER
Atlus

REVIEWED ON
RTX 3080, Intel i9-9900K, 16GB RAM

MULTIPLAYER
No

LINK
atlus.com/p5s

make interesting decisions. Do I hang out with Ryuji today or study for my exams? With limited days between massive, story-altering deadlines, my choices determined who I made lasting friendships with and who I left as casual acquaintances.

In *Strikers*, the daily rhythm doesn't exist. There are no social links to tend to. I'm just occasionally gifted upgrade points after certain scenes, most of which feed into buffs for the bland combat. Dialogue choices rarely matter, and if they do, there's no feedback saying so. Passing time in *Strikers* gets monotonous, with endless dialogue and scene changes devoid of interaction. It really coasts on the hope that you loved *Persona 5* and have bottomless patience. Besides a few limp character beats, *Strikers* has few reasons to hang around for 30 hours.

The premise might be the only reason I stuck around. I wish I had something so simple and cool to take a dig at the effects of social media and data collection on daily life through the lens of jazz, anime, and street art when I was younger. I mean, the first boss is an influencer who turns into a monstrous rabbit at the centre of a deranged amusement park. And the rabbit's big, fluffy tail has a damn mouth. I don't know that it contributes to the theme other than to make *Strikers* more interesting to look at while characters deliver long, moralising messages to one another about influence and popularity and the true meaning of friendship, but it >>

PERSONA OF INTEREST *Who's who in the Phantom Thieves*



JOKER
You, the player character.



RYUJI
Jock, your best bud.



ANN
Model, eats a ton.



MAKOTO
Prep, rides a motorcycle.



MORGANA
Cat, thinks it's a human.



YUSUKE
Artist, honestly the worst.



FUTABA
Nerd, flies a UFO.



HARU
Green thumb, big-ass hammer.

works. Most of my attention was spent waiting to see *Strikers'* next wild monster or trippy environment take goofy jabs at social media.

STRIKE ONE

Nothing about *Strikers'* story is particularly sharp or deep, but for a younger audience, its critiques could feel revelatory. It's an optimistic story, too, a road trip with old friends that encourages action and hope in the face of seemingly implacable, ages-old institutions. *Strikers* can be cute as hell too, but the shine does come off while beating down the same blur of grunts and monsters time and time again.

Koei Tecmo's here with that love it or despise-it-more-than-anything *Dynasty Warriors*-style combat, including the finicky camera that never seems capable of highlighting the guy about to bust out a huge attack just out of sight. Tappa-tappa-tappa. Light attack, light attack, heavy attack, dodge, and repeat, forever. Even the Berserk spin-off couldn't get me to like the stuff. You're not working through massive battlefields, murdering millions for control points this time though. In *Strikers*, combat is often initiated like it is in *Persona 5*, or most other JRPGs. You'll see an enemy

wandering around a dungeon, bump into it, and suddenly the room's a fire hazard, packed with dozens of enemies to fight.

Fights are just pockets of *Dynasty Warriors* action, repetitive melee

combat propped up by a Persona summoning system that uses spirit points or precious HP on elemental area-of-effect damage, opening up enemies for special attacks. There's some amount of strategy involved, but the action really amounts to managing a crowd, choosing the most efficient Persona attack to perform critical damage on as many enemies as possible, and repeating. Enemies respawn in dungeons too, ensuring you'll get to know the basic combo just a bit too well.

Strikers never slows down to truly teach whatever nuances there are in the combat, either. Most situations are easy to get through with each character's basic combo and a dodge and elemental Persona attack thrown in for good measure, and there's

Never slows down to truly teach whatever nuances there are

PERSONA NON GRATA

The Personas you don't wanna meet in your mind palace



ARA MITAMA

Punctuation was scary enough already without it coming to life.



MARA

Phallic design is one thing, but that's just a green penis chariot.



SATAN

Yeah, that guy. You know something's wrong when the Devil is on your team.



BELPHEGOR

At least this one is easy to identify with. He's just missing a Switch.

nothing about the flow of combat or the context of most scenarios that specifically calls for, teaches, or rewards more advanced combos and character switching. I got through it all with the same mashy tactics I learned in *Lego Star Wars* 15 years ago. Sometimes I'll stun a group of enemies and get to pull off a special move or an all-out attack, treating me to a cool animation, but then it's back to the mines, hacking away at enemies until there are no more left to hack away at.

Compare that to *Persona 5*, where the streamlined turn-based combat makes meaningful use of every character and their Personas, forcing the player into challenging scenarios to puzzle their way out of. In *Strikers*,

I didn't really need to consider my team composition or think too much about what Personas they were carrying. If I saw a weakness within the smudge of enemies painting the screen, I'd deploy it. If I got too

trigger happy with my Persona abilities and ran out of spirit points, I'd just dip out of the dungeon and back in again to rest my characters without a time penalty. I can remember many distinct fights from my 100-plus hours of *Persona 5*, but none from the slurry of button-mashing to delete legions of mooks in my 30 hours with *Strikers*.

UNDER THE INFLUENCE

It's odd, to make a game so faithful to the style of *Persona 5* only to jam in something so clearly out of place and expect diehard lovers of the social, turn-based RPG to get along with it all like old pals. Something is wearing the skin of my friend, telling me nothing's wrong, that, no, I'm being weird. I worry that the *Persona 5*

evangelisers drawn to *Strikers'* warm, familiar embrace are about to hit a brick wall of boredom.

At least it's a good port, just one clearly anchored to its console origins. The biggest bummer is the 60fps cap, especially for an animation-heavy action game. Textures that look fine on native console resolutions stand out at much higher resolutions on PC, and not always in the best way. Awnings, vending machines, and anything that isn't just lines and colour haven't been touched up for higher resolutions. Not devastating, but we like the royal treatment on PC.

Most importantly, it runs well. I stay huddled up against that 60fps cap with ease, my GTX 3080 barely breaking a sweat. In a few hours of play I haven't seen any crashes or hitching. Customisable keyboard controls are there, a nice suite of language options – the works. It's a pretty decent port!

Persona 5 Strikers is a novel spin-off and sorta-sequel to a great RPG that most of my friends can't play yet. But even though it's packing a lot of signature style in mimicking the distinct look and sound of *Persona 5*, *Strikers* is a bone-thin road trip whose charm can't make up for the time and attention it takes to weather the mindlessly repetitive combat and negligible stakes.

There are far better third-person combat games out there. Better RPGs. Better visual novels. None quite look or sound quite like *Strikers*, except for *Persona 5*, but you'll be fine letting the memory of *Persona 5* stand on its own (if you can ever play it). ■

PC PowerPlay VERDICT

Strikers walks and talks like *Persona 5*, but no social game and bland combat make it one strictly for gigafans.

63

LUPINE TO CONCLUSIONS

WEREWOLF: THE APOCALYPSE – EARTHBLOOD
is an old-fashioned brawler with teeth. *By Luke Kemp*

The *Vampire: The Masquerade – Bloodlines 2* release date may keep running away from us like a startled deer, but here's another chance to enter the World of Darkness at least. Concerned with werewolves rather than vampires (clue's in the name), it's an action-RPG where the 'RPG' bit is pushed to the sidelines until it's almost invisible. It's earnest, a little bit shonky, clearly wriggling through some budget constraints... and proof that one rough but fun game is worth a hundred glossy but dull ones.

It's not a game to wow somebody who happens to walk past while you're playing. The character models have arrived fashionably late from 2010. Still, *Werewolf: The Apocalypse – Earthblood* is refreshingly keen to throw you straight into the action. The game starts off with a chat between you and a few members of your pack regarding your plan to sabotage a nearby fracking site. And twenty minutes or so later, you've inhabited all three of hero Cahal's forms, most of the game mechanics have been introduced, and sufficient drama has taken place to kick off the next leg of the plot.

The story jogs along like this until the end, which works very well. Whether gameplay itself hurtles along without pausing for breath is up to you. The bulk of the game is made up of fairly small areas full of enemies and, fundamentally, it's all about making your way to the exit so you can enter the next area. This is where the cool ability to change forms comes into play.

In two-legged form, looking like a ne'er do well more likely to start a fight than stop one, Cahal can silently take down guards and shoot a (strangely cumbersome) crossbow. He can also sabotage reinforcement-spawning doors if undetected, dealing hefty damage to anybody who comes through them. In wolf form, meanwhile, he can move faster and slip through vents, which is great for a stealthy approach.

If you're careful, you can make your way through a surprisingly large

amount of the adventure without engaging in combat. While I give myself a pat on the back each time I successfully escape unseen, more often than not I get caught sneaking across the floor like a guilty child with their hand in the cookie jar, which I think is the best way to experience the game. As soon as I get hit I automatically transform into the third, most powerful, form – full-on

werewolf – used for combat.

You can, if you wish, initiate this transformation at the first sign of an enemy, and there's reason to do so. Combat is rather simple – the AI isn't

**I simply
slaughtered
him and
everybody else
in one epic fight**

NEED TO KNOW

WHAT IS IT?
An eco-warrior werewolf sim that plays better than it looks

DEVELOPER
Cyanide

PUBLISHER
Nacon

REVIEWED ON
GeForce GTX 1650, AMD Ryzen 5 3550H, 8 GB RAM

MULTIPLAYER
No

LINK
werewolf-videogame.com/en

exactly Deep Blue level, and it's a bit button-bashy – but dammit it's *fun*. Tearing through squishy humans, occasionally grabbing one to rip apart, is a violent joy. When you're forced into combat after a bungled attempt to slip past unnoticed, though, you benefit from having thinned out the numbers a little and (hopefully) weakened at least some of the reinforcements. In this way, the time and effort you put into trying to be stealthy is still rewarded.

WOLF'S WORTH

One sign that the original vision for the game may have been grander than the available budget is the implementation of choice; or, rather, the lack thereof. Conversations rarely offer any meaningful decisions, and there are only really three occasions where you can approach a situation in two very different ways. But what occasions they are! One, in a prison, tasks you with running errands for an incarcerated mafia boss in order to access a secret area. This is what I did... first time round.

In my second playthrough, I simply slaughtered him and everybody else in one epic fight, after which my friend – expressing hilarious shock at my actions – gave me the keycard I needed, which had been recovered from the bloody corpse of the mafioso.

Combat is arguably oversimple, and rarely a challenge on any difficulty. The inability to backtrack or create multiple saves means the rare instances of choice are one-shot deals. Yet I've played this game from start to finish twice, and enjoyed it both times, which counts for a lot. It's a B-movie experience in the best possible way; not so bad it's good, but so *determined* it's good. ■

THE BRAVE AND THE BALD

The hero of our story, Cahal

SHAVEN HEAD
Nobody will suspect he's a werewolf!

TATTOOS
So everybody knows he's tough.

MOUSTACHE
If you can grow facial hair like this, why wouldn't you?

BIG FLUFFY COLLAR
Well, he doesn't want to get chilly.



PC PowerPlay **VERDICT**

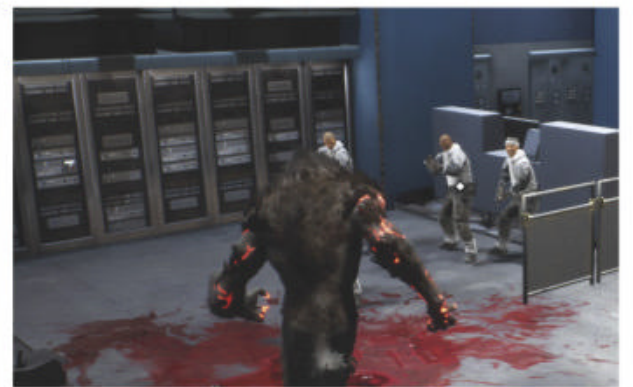
Werewolf: The Apocalypse – Earthblood mixes stealth with action, and the fun doesn't snag on the rough edges.

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Fights get messy.



It's the moo0000000ooooon.



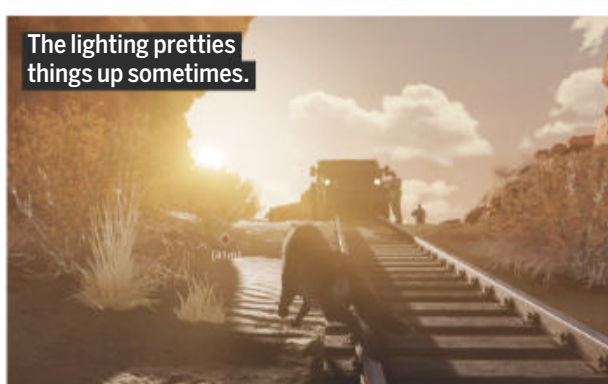
The monsters aren't quite so fun to slaughter as humans.



'Inmate' on the back, in case the orange jumpsuit didn't give it away.



The lighting pretties things up sometimes.



HARPOON ON

Darkly atmospheric action adventure
OLIJA delivers great grapples. *By Alex Wiltshire*

The grappling hook, which everyone knows is gaming's best mechanic, has a new star. *Olija* features an eldritch harpoon that grapples on to enemies and orange-eyed black tentacles, and you can teleport to it with a slash. It's a simple design which sits at the centre of this dark action adventure as both a combat tool and a way to traverse its levels, and which constantly delivers a sense of choice and movement.

It's not without issues. The harpoon can be fiddly because it requires two separate double-inputs, first to throw it, and then to push in its direction while hitting the throw button again to teleport. Hit throw without a direction and it'll return. In battle, it's easy to find yourself fighting without the harpoon, which is your main weapon, or failing to teleport.

Still, the harpoon made me feel powerful, and besides, *Olija's* combat is more about mobility than precision: harpooning past a bunch of enemies to get to a more dangerous ranged one, then harpooning out of harm's way. There are subtleties: you can switch between several secondary weapons, including a rapier, crossbow, and a shotgun, which can deliver powerful finishers.

You play as Faraday, a European whaler whose ship has been wrecked. What remains of his crew is now stranded on an island called Terraphage, which lies in seas

ravaged by the demonically infected Clan Rottenwood. Here, once-glorious temples and places of learning are now decaying. Its remaining heroes only speak in gnomically taciturn non sequiturs and the people have fallen to shades.

You're out to find the three blue keys which will open the Shadow Gate so you can sail home again. But the blue keys lie behind barriers which require two or more

yellow keys, which you'll find as you delve into each location. Levels aren't sprawling affairs, but you'll find branching paths which lead to different goals, lending them a sense of depth and choice, and you can generally revisit them to grab materials you can use to craft ability-granting hats.

HOOK, LINE, AND SINKER

Olija only took me five hours to complete, though there's not an ounce of flab. Every moment is

Olija's combat is more about mobility than precision

NEED TO KNOW

WHAT IS IT?
An atmospheric action adventure with a grapple-harpoon

DEVELOPER
Thomas Olsson / Skeleton Crew Studio

PUBLISHER
Devolver Digital

REVIEWED ON
Intel i5-6600K / Nvidia GeForce 1070 / 16GB RAM

MULTIPLAYER
No

LINK
olija.com

considered. There are surprising and pace-shaking set pieces which mix up your expectations, and the action flows so smoothly that I could easily have finished it in a single session. In many respects, however, *Olija* is too lean, since it didn't fully give me a chance to explore all of the skills and tools it offers. By the end of the game, I'd only worn a couple of the hats and had barely used two of the secondary weapons. It introduces one powerful new item so late in the storyline that its potential felt unexploited.

Arguably, being left hungry for more is better than being bored with what you have. And it's easy to understand *Olija's* brevity, since it was made by just one person, Thomas Olsson, who also drew and animated its beautiful pixel art and designed its sound. Faraday's boots clunk along wooden boards, his blade schwings, enemies cackle, and bodies splatter, all with heft that gives its world a physicality which pixel games often lack. The music, too: discordant, smoky saxophones, mournful horns, and strident strings, with a mix which favours subtle bass rumbles which both unsettled and transported me into its world.

I was bowled over by the level of quality this one person has achieved. *Olija* is clearly Olsson's personal work, and its story, of Europeans lost in mysterious and frightening Eastern waters, in part reflects his own experience of moving from his birthplace in France to Japan to be with his wife. But I felt sometimes a disquieting air of orientalist fantasy, as we encounter a culture headed by the beautiful Lady Olija. But I also loved the clash of rough and ready mariners facing a strange world of corrupted beauty. I only wish it was a little longer. ■

PC PowerPlay **VERDICT**

Made by just one person, Thomas Olsson's *Olija* is a grimly thrilling adventure which is just over too soon.

83

GREAT GRAPPLES *The best things in games that latch on to another thing*



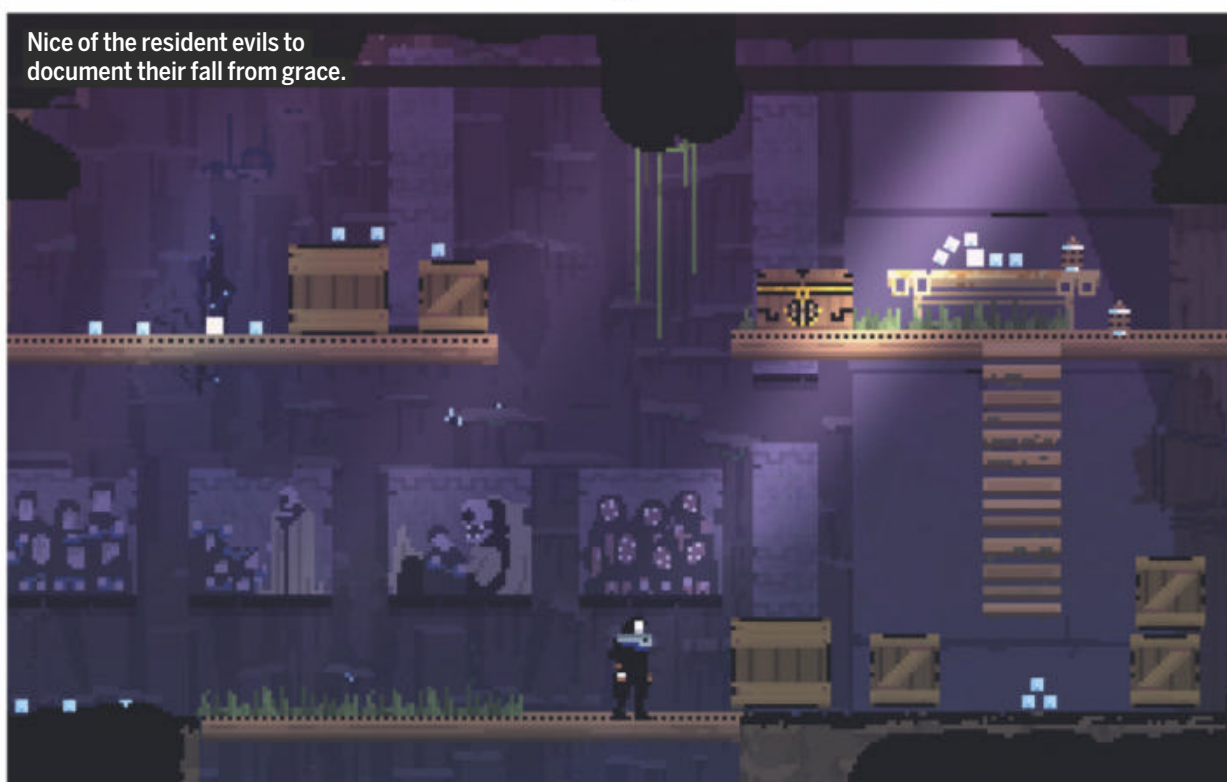
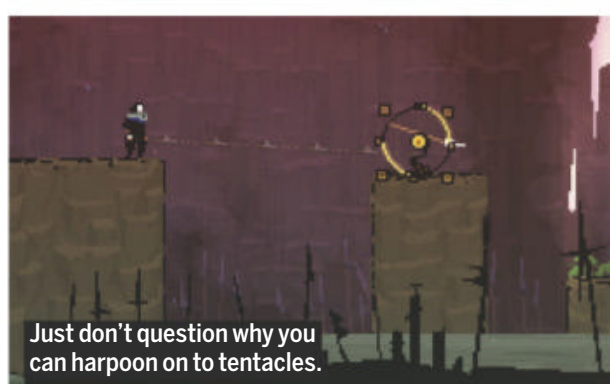
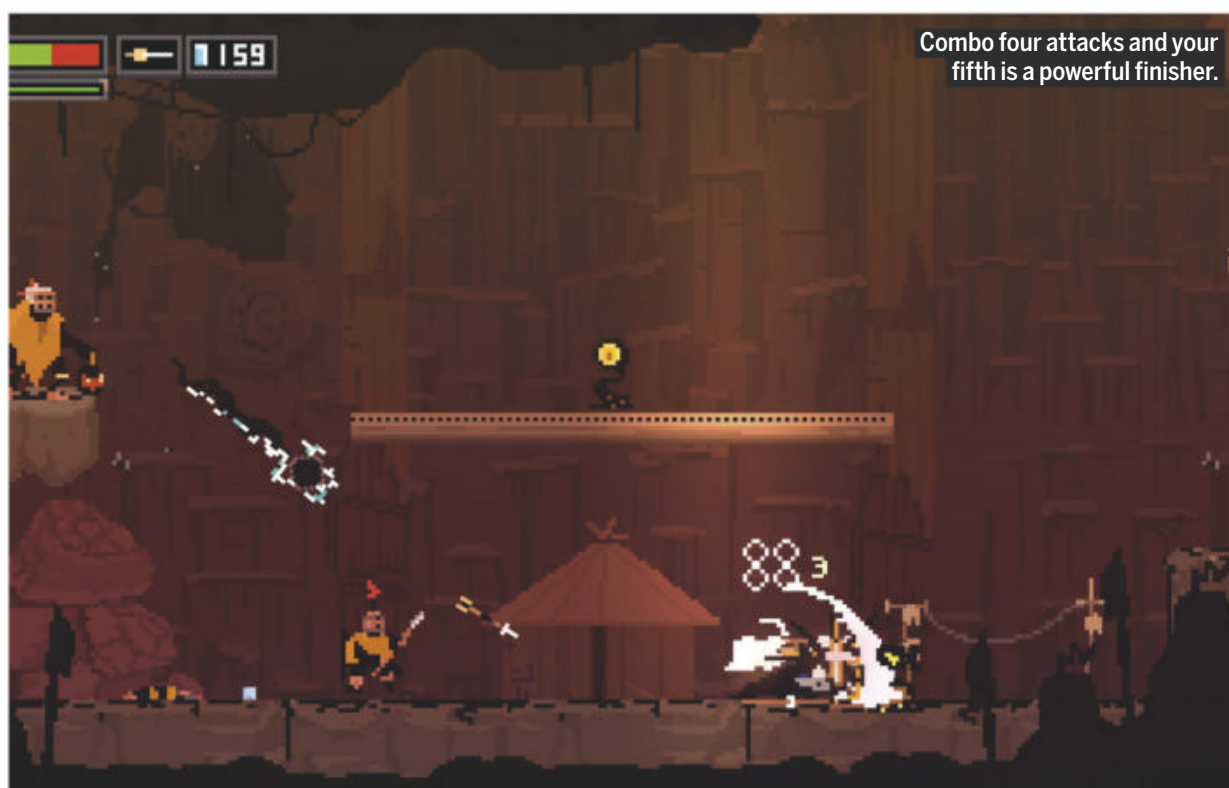
BATMAN: ARKHAM CITY
Bats' grapple is versatile: it lets you haunt buildings' eaves, ready to swoop in for a punch, it pulls goons in a ruck, and it pairs brilliantly with his glide to let you fly.



SEKIRO: SHADOWS DIE TWICE
In a game as exacting as *Sekiro* the grapple offers relief, giving you breathing room and opening options as you grapple out of combat and then choose how to re-engage.



TITANFALL 2
Oh, the skill. This tool for traversal has elegant depths you can't imagine when you first use it, allowing the very best tiny soldiers to face its giant mechs as equals.



BRUTAL LEGENDS

Make your own myths in
GODS WILL FALL. By Alex Spencer

With the exception of *Spelunky 2*'s moles, it's been a long time since a game has wrung quite as many swears out of me as *Gods Will Fall*. I've turned the air blue with eulogies to fallen comrades, cursed its pantheon and effed and jeffed my way across its god-infested island. Make no mistake: this is a good thing. Most of the time, anyway.

The main target for this barrage of f-bombs are the ten deities at the game's centre – a cruel and unusual bunch who rule over humanity with an iron fist. Time to enact the title of the game, with a plan that has the fatal flaw of involving a fleet sent across the sea to attack a group of celestial beings who *have control over the elements*. And so you wash ashore, an army of thousands whittled down to eight. A little salty language is probably to be expected.

Luckily, these eight survivors are a real bunch of Celts, each handy with their weapon of choice: twin maces perfect for getting the first hit in, the blessedly long reach of a spear, heavy axes that drag along the ground and release in a killer upswing. You'll likely warm to a particular playstyle, and whichever warriors happen to wield it, something the game smartly doubles down on by giving them a randomly-generated name, look and story.

A real bunch of Celts, each handy with their weapon of choice

And then they start dying. As you wander the island you'll find ten doors, each leading to a dungeon overseen by a different god and themed to match whatever they're god of (war, fertility, all-you-can-eat buffets). Slip up while battling your way through their minions, or the boss fight at dungeon's end, and your warrior will be claimed by that god. Back on the island, you can choose to have another try – essentially gambling another of your Celts

– or go and see what's behind another door. The latter might be the smart choice, thanks to difficulty levels that vary hugely from god to god – but you never know which ones will be harder or easier, because they're randomised for each playthrough. And besides, if you can make it to the end of this one and slay the god-boss, you'll free any warriors under their thrall. It makes for a proper tooth-grinder of a choice, and some incredible highs and lows. Let me show you what I mean.

NEED TO KNOW

WHAT IS IT?
Face god(s) and walk backwards into hell

DEVELOPER
Clever Beans

PUBLISHER
Deep Silver

REVIEWED ON
Radeon RX 580, AMD Ryzen 5 2600 3.9GHz, 16 GB RAM

MULTIPLAYER
No

LINK
godswillfall.com

MORRI-GONE

A single Celt stands outside the gates to Morrigan's forge-themed realm. This is Gwenn of Little Kaelaff, and all seven of her compatriots are trapped. Gwenn wields a sword, meaning she's not seen battle so far – which in turn means that she's not picked up any of the buffs or skills that more experienced warriors accrue. Lose her, and it's right back to the start with a new band of warriors.

I load Gwenn up with all the equipment gathered from previous realms – throwing knives and spike traps and healing skewers of meat – and take it very slowly, my heart beating so hard I can't tell controller vibrations from my own pulse. Somehow, she makes it all the way to Morrigan, in the form of a giant crow, who turns out to be one of the easier boss fights I've encountered. It helps that I've got a backpack full of throwing knives, of course.

Her wings harden into stone, then crumble... and Gwenn stumbles into the light with an entire troupe of Celts. Obscenities are yelled, but cheerfully. It's the single most exhilarating moment I've had in a game so far this year.

Like *Dark Souls* and *Spelunky* before it, *Gods Will Fall* is a game that runs on frustration. It's less punishing than those games, and considerably shorter than your standard *Souls*-like – a successful run should take around eight hours. But you'll still step away with war stories that feel hard-fought – albeit ones that, with no inns or taverns to tell them in right now, might never leave your bedroom. But it doesn't matter all that much, because most of these stories can be summed up in a single word. Specifically, the type of word with four letters. ■

PC PowerPlay VERDICT

Gods Will Fall is an inventive *Souls*-meets-roguelike that frustrates and delights in pretty much equal measure.

84

A GODKILLER'S GUIDE

The mythological origins of *Gods Will Fall*'s exceedingly big bads



BELENOS

A Celtic sun god, though here he seems to have nicked the wicker-man gimmick from Taranis, god of thunder and fire.



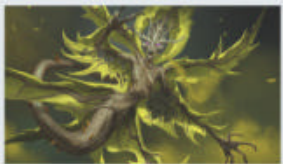
MORRIGAN

A war goddess plucked out of Irish myth – and gods-as-popstars comic *The Wicked + The Divine* (where she is less birdy).



OGMIOS

The real Celtic equivalent was able to bind humans to himself with mighty powers of persuasion. Here, he uses his tongue.



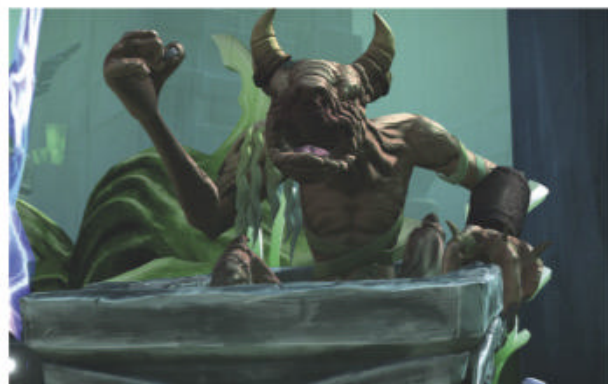
BREITH-DORCHA

Pretty sure this one's made up, but her name literally translates to 'Dark Birth' in Irish. She's all about poison and decay.

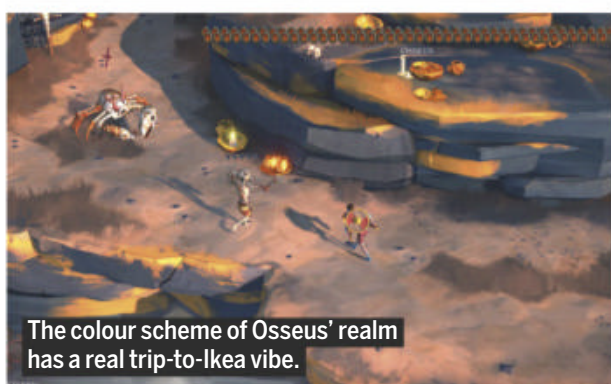
Killing minions chips away at each god's life bar.



Morrigan's forges have a chance of upgrading your weapon – or breaking it.



You can regain health using Bloodlust, a bar that charges with each attack.



The colour scheme of Osseus' realm has a real trip-to-Ikea vibe.



Some of the gods are just pigs. Big ol' pigs.

OLDE FASHIONED

FIELD OF GLORY II: MEDIEVAL is a solid but safe tabletop-style treat. *By Jon Bolding*

The cavalry is here, y'all! Actually, the cavalry has always been here. We started with the cavalry. This ain't no Ancients-era *Field of Glory* game. Gone are the legionaries and barbarians, replaced instead with ranks of spearmen and the thunderous charge of knights in enough armour to make a toaster blush. *Field of Glory II: Medieval* delivers an authentic tabletop miniatures wargame experience, but just like a historical wargame whether you like that experience is going to be all about whether you like the rules.

This is a wargamer's wargame. There's no nice music. The graphics are barebones. The UI is pretty basic. You'll want to memorise hotkeys. What there is are 50+ hours of historical scenarios and campaigns. The famous battles give you a prearranged battlefield and let you pick a side, then customise it a bit. The campaigns give you good context on a fixed route while still letting you make decisions about your army's composition.

Multiplayer is handled in the same asynchronous style as past *Field of Glory* games, which is disappointing and frustrating if you want to finish a match in one sitting. It's just functional enough if you can only sit down to play for 15 minutes at a time. Very unimpressive and underwhelming.

FOG II: Medieval's battles focus on historical simulation over clever or puzzle-like tactics scenarios. It delivers that in spades, with the kind of battles a history buff salivates over. They're dynamic and unpredictable, forcing you into surprising scenarios when troops unexpectedly flee or the enemy makes a surge. You use those rules to take an array of historical factions through the scenarios.

Randomly generated battles and campaigns are nice, simple, and pretty customisable – you can ask yourself questions like “what if the Mongols made it to France?” or “what if Sweden invaded England?”. The custom campaigns don't have much strategic depth, but they do let you carry an army from one fight to the next. They're also excellent if you like the idea of connected scenarios you didn't personally plan: ambushes,

rearguard actions and the like aren't usually situations you put yourself in on purpose. Some of the longer ones will take you a couple of hours.

Battles take so long to play because they're a medieval meatgrinder. Troops lock each other into melee, only sometimes falling back or escaping from that melee due to morale **breaking or combat** results – neither of which are something you particularly have control over once the brawl begins. Your job

is more often than not about choosing favourable positioning and matchups for your troops. You try to deploy your spearmen to tie down the enemy's knights, your light troops in difficult terrain and your cavalry to break through the enemy line.

Battles take so long to play because they're a medieval meatgrinder

NEED TO KNOW

WHAT IS IT?
Grid-based medieval battle simulation

DEVELOPER
Byzantine Games

PUBLISHER
Slitherine Ltd

REVIEWED ON
AMD FX-8350, Nvidia GeForce GTX 1070 Ti, 32GB RAM

MULTIPLAYER
Yes – but only asynchronous

LINK
slitherine.com/game/field-of-glory-ii-medieval

MEDIEVAL MADNESS

That's where the era's premier units really shine. Armoured knights on horses are dangerous shock cavalry, shattering lines of unarmoured, unmounted men into routs. Well-armoured foot soldiers can stop them in their path, though, so you have to be careful where you commit your elite troops. Once the enemy starts to run, as is true of the medieval period, your knights are liable to chase them all the way to the edge of the battlefield – sometimes even beyond. It can result in hilarious unexpected situations and is generally a delight.

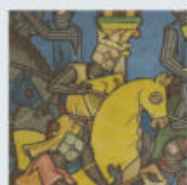
That aside, some of the game just doesn't feel properly medieval. The time period starts at 1040 and runs to 1270, stopping just short of the grandiose 14th century finale of armoured knights, longbows, and mercenary crossbowmen. The ruleset's emphasis on flanking manoeuvres over numerical advantage makes a lot of sense in the ancients period, but it feels silly when three units of elite infantry can't make a squad of enemy recruits flee in a single simultaneous assault.

Finally, the fights just tend to stick in one place for too long. It's most noticeable in a scenario like Hastings. The battlefield was supposedly a very dynamic place as one side or the other broke formation to pursue the routing enemy, only to be caught up in a counterattack. In *Field of Glory II's* model, fleeing troops only rarely rally and come back to the fight, and you can't set up a fake retreat to lure the AI out of position.

Those shortcomings don't dull the thrill of victory. The way battles hang on tense moments and unknown outcomes from chaotic melees is no less tense in *Medieval* than in other *Field of Glory* games. There are a lot of wargames on PC, and it's nice to see the medieval period finally get some turn-based love. ■

MEDIEVAL DUDES

These are your most important bros



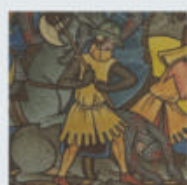
KNIGHTS

The stalwart lords of war. Smash them into the enemy if you must, but flanking is better.



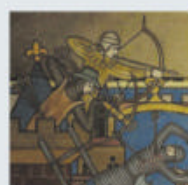
INFANTRY

Slow dudes. Tough enough if armoured, but only rely on them to hold the line.



HEAVIES

Secret chads of combat. Two-handed weapons chew up infantry and knights alike.



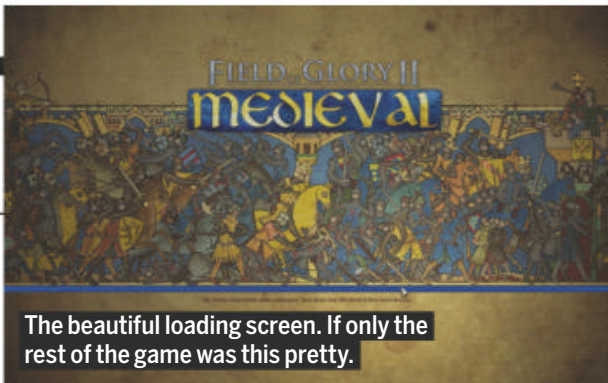
BOWS

The wingmen of the battlefield. Concentrate their fire on one target for maximum effect.

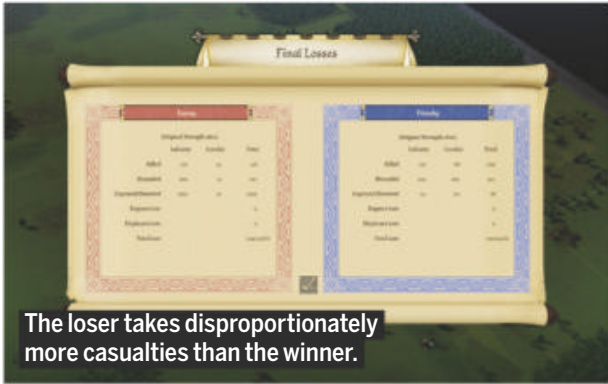
PC PowerPlay VERDICT

Field of Glory II: Medieval is the closest to a tabletop miniatures experience that you'll get on the PC.

70



The beautiful loading screen. If only the rest of the game was this pretty.



The loser takes disproportionately more casualties than the winner.



Flanking your enemy's forces is vital to success.



The centre holds as the left and right flanks collapse into chaos.



Campaign-level decisions are exceedingly simple.



CYBERSLUNK

DISJUNCTION is a top-down stealth game that's a tad too tricky for its own good. *By Rick Lane*

A slick and stalwart stealth puzzler, *Disjunction* is *Splinter Cell* by way of *Hotline Miami*. Assuming the roles of three different characters, you must navigate your way through an array of fast-paced, fiendishly devised levels, slipping through shifting mazes of vision cones as you attempt to unravel a typically twisty cyberpunk conspiracy in a near-future world. It has style in spades, but can also be infuriating. The game doesn't always play to its strengths, and sometimes seems to enjoy wrong-footing you.

Disjunction kicks off as a hard-boiled detective story, with cybernetically enhanced-sleuth Frank Monroe investigating the possible framing of a local community leader for the murder of a policeman. As with any good cyberpunk story, this simple case soon spirals into something much bigger. Two more player characters are introduced: an underground boxer who goes by the nickname Lockjaw, investigating the death of his daughter, and a female hacker named Spider, reluctantly drawn into the case after Lockjaw asks her to crack an encrypted tablet.

It's derivative near-future sci-fi, but *Disjunction's* tale is sharply and engagingly told. Given that this isn't primarily a narrative game, its storytelling systems are surprisingly robust. Most conversations come with an array of choices, some of which can make a significant

difference on the overall outcome of the story. Indeed, from a general presentation perspective, *Disjunction* is executed superbly. I'm generally not a fan of pixel art, but its hard to complain about the game's crisply drawn characters and vividly painted environments. Levels and dialogue scenes, meanwhile, are accompanied by a pulsing, buzzing synth soundtrack that matches the game's style and tone perfectly.

All of this acts as a framework for a series of natty stealth challenges

All of this acts as a framework for a series of natty stealth challenges. Your broad goal is always to sneak (or shoot) your way through a secure location. When I say 'secure', I mean it. Each level is tightly locked down by patrolling guards, surveillance cameras, and a host of robotic sentries ranging from scuttling spiderbots to exploding Roombas. Missions are stuffed with enough vision cones to make Solid Snake

WHAT IS IT?
Stylish and challenging top-down stealth puzzler

DEVELOPER
Ape Tribe Games

PUBLISHER
Sold Out

REVIEWED ON
AMD Ryzen 5 3600,
Nvidia GeForce 2080 Super, 32 GB RAM

MULTIPLAYER
No
LINK
disjunction-game.com

quiver in his cardboard box. Most enemies will spot you within a second of straying into their line of sight, at which point you have two choices: fight or die.

DISJUNCTIONAL

What *Disjunction* lacks in originality, it makes up for in pace and, to a lesser extent, challenge. The stealth is tightly wound, demanding precise movements and speedy reactions. It's a refreshing change from most stealth games, which tend to emphasise planning and caution. After a few hours playing *Disjunction*, you'll find yourself moving through levels by instinct, your gut telling you where to hide, when to nab that keycard or dash for the doorway.

This quickfire stealth is undoubtedly where *Disjunction* is at its strongest. Unfortunately, the game doesn't always play to it. One of the biggest issues is the camera, which is fixed at a low altitude above your character, preventing you from seeing the wider layout of a level

Alongside this are a couple of other issues that needlessly frustrate. Most rooms of a level are separated by short corridors which appear to be designed as a breathing spot, letting you plan your next moves. But guard vision cones frequently stray into these spaces, forcing you to move out into the next room before you want to. The checkpoint system is also inconsistent. In some levels, they're evenly placed, but others force you to complete lengthy stealth sequences which are simply not fun to repeat.

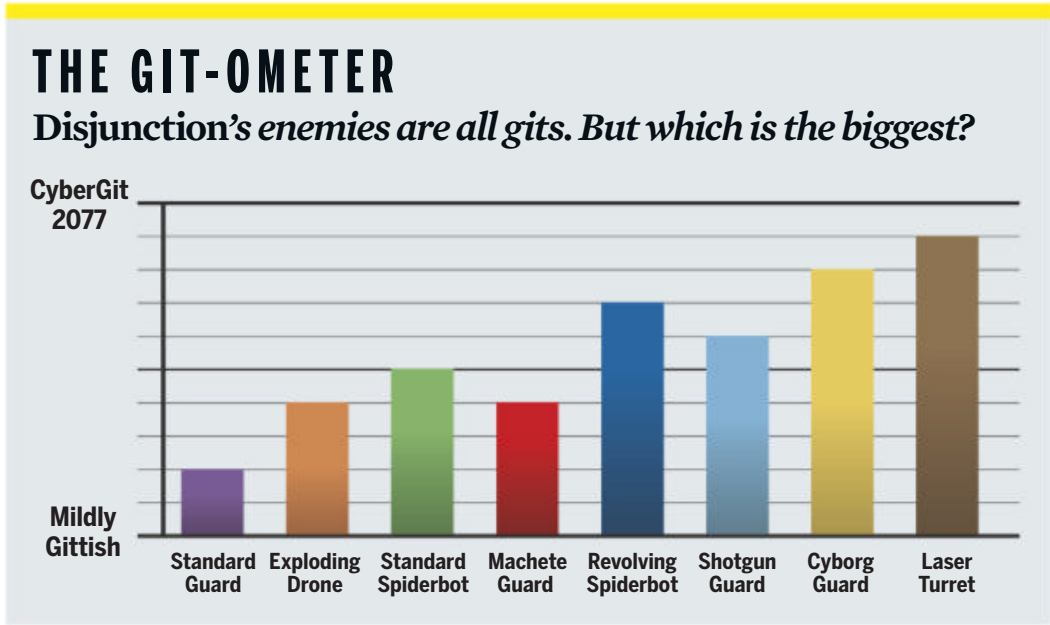
It's unfortunate that *Disjunction* can veer from being challenging into unfair, lacking a certain clarity to the rules of its world, because otherwise it's a slickly designed and rewarding stealth puzzler. ■

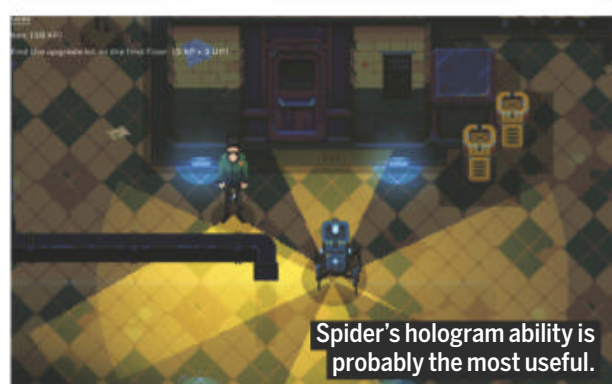
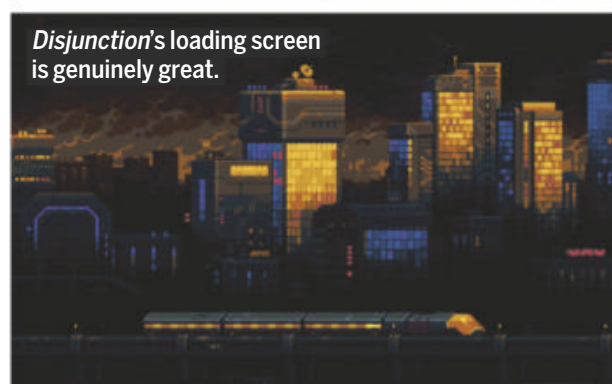
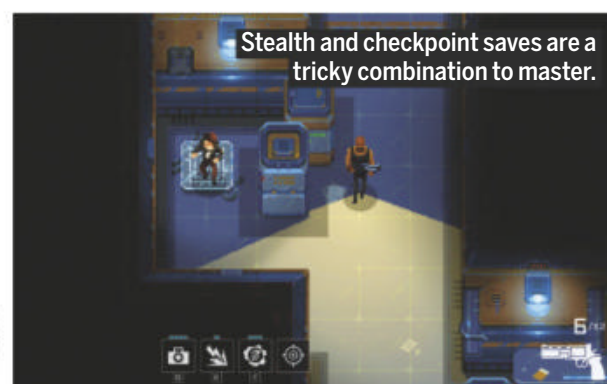
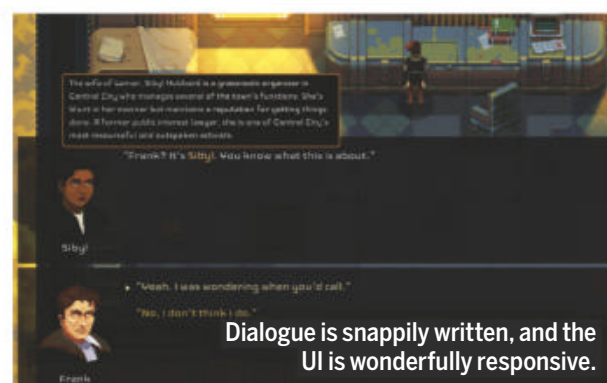
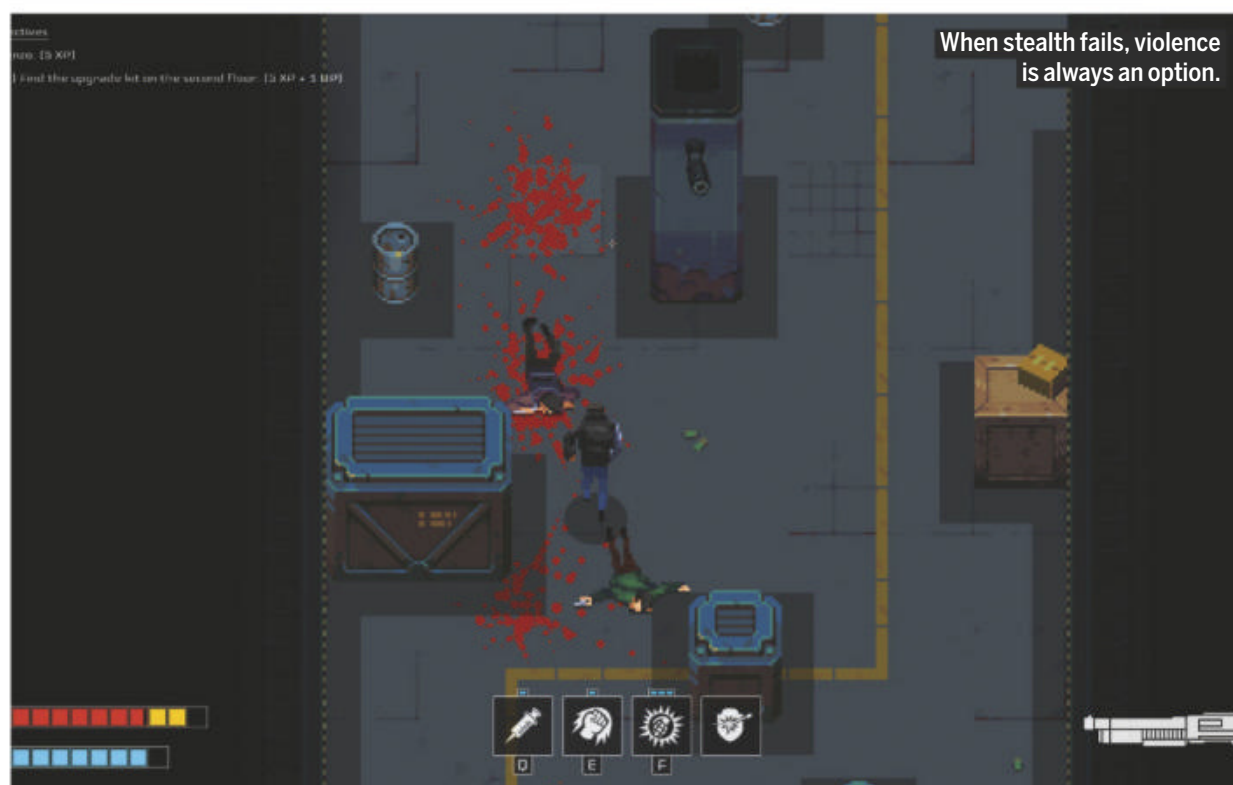
PC PowerPlay

VERDICT

Thankfully the compelling story and speedy stealth action make up for *Disjunction's* less even moments.

72







Tech

YOUR GUIDE TO PC GAMING HARDWARE.



Our Power Award is given to products that are best in class no matter your budget.



Our Smart Buy Award goes to products that balance performance with price tag.

GEAR THIS ISSUE

079 TURTLE BEACH STEALTH
600 GEN 2 080 EXTERNAL SSD
GROUP TEST 084 ANDA SEAT MARVEL
GAMING CHAIR 081 ROG BEZEL-FREE KIT
082 CPU GROUP TEST

THE PCPP TESTBENCH

CPU INTEL I7 7700K INTEL.COM.AU
MOBO ASUS Z270 ROG CROSSHAIR
VI HERO ASUS.COM.AU
RAM 2 X BALLISTIX 8GB DDR4-3200 CRUCIAL.COM
PSU CORSAIR 850W PSU CORSAIR.COM
COOLING H105 CORSAIR COOLER
WWW.CORSAIR.COM.AU





HEADPHONES

Turtle Beach Stealth 600 Gen 2

An affordable gaming headset that's made for Xbox consoles.

PRICE \$169.95 ONLINE <https://au.turtlebeach.com>

While there are more premium gaming headsets currently available for Xbox One and Xbox Series X/S gamers, Turtle Beach's Stealth 600 Gen 2 delivers exceptional bang for your buck, thanks to its excellent sound quality and robust features.

Apart from its dedicated PS4 version, Turtle Beach offers a Stealth 600 Gen 2 model that's designed specifically for Xbox consoles, meaning users can pair the gaming headset directly to their Xbox One or Xbox Series X/S without the need for a USB dongle or optical connection – it's as simple as pairing a controller. Moreover, the Xbox version works just as well with Windows 10, although you will need to purchase an additional Xbox Wireless Adapter (RRP \$29.95) in order to pair the headset to your PC.

From an audio standpoint, the Stealth 600 Gen 2 delivers vibrant spatial sound (the headset worked well with Windows Sonic and Dolby Atmos for Headphones) with a decent amount of depth. This is due to their powerful 50mm drivers,

which offer exceptional clarity and bass, depending on your audio preference. The surround sound effect proved convincing at all times, allowing us to hear approaching enemies from all angles. We also came away impressed with the headset's lack of distortion – particularly during loud in-game explosions.

The Stealth 600 Gen 2 headset also does a good job of allowing the player to tailor the audio experience to their liking, with a mode button which lets you cycle through four EQ settings: Signature Sound, Bass Boost, Bass + Treble Boost and Vocal Boost. Additionally, a quick press of the power button will enable Superhuman Hearing mode, which amplifies subtle sounds like footsteps and reloading weapons.

You also get a flip-down mic that mutes when retracted into its upright position, separate volume rockers for chat and game, along with the much appreciated inclusion of mic monitoring, allowing you to hear your own voice while you chat. Voice quality is decent, but we've heard clearer, fuller chat audio from higher-end headsets, such as Razer's BlackShark V2 Pro and Logitech's G

Pro X Wireless. In terms of battery life, Turtle Beach's Stealth 600 Gen 2 offers around 15-hours of game time before needing a recharge, which is fairly standard for wireless headsets at this price range.

It wasn't always smooth sailing, though – we experienced a spotty connection on a couple of instances during online matches in Call of Duty: Black Ops Cold War, with dotted sound resembling Morse Code coming through. In fact, it was intrusive enough that we were forced to switch the headset off and on again to make it go away. That said, it didn't occur often enough to be a real cause for concern.

It's also worth noting that the headset has a somewhat cheap plastic feel, and it sits fairly tight on the head and on the neck below the ears, leading to some discomfort during long gaming sessions. That said, STEPHEN LAMBRECHTS

PC PowerPlay

VERDICT

Turtle Beach's Stealth 600 Gen 2 gaming headset is a terrific all-rounder for those who want to keep a lid on their finances.

82

GROUP TEST

EXTERNAL SSDs

Running out of bytes? It pays to pick up one of the best external SSDs. *By Jeremy Laird*



If you want speedy storage performance on the go or between devices, your best option is an external SSD with plenty of bandwidth. That'll net you the enticing possibility of actually running your games from a portable drive, which is not only great for laptop gamers, it's a must-have with the latest generation of consoles, too.

The best USB Type-C drives deliver performance well beyond internal PC SSDs from just a few generations ago. Some external SSDs now crank out as much as 2Gbps of raw bandwidth.

Admittedly, that's a long way off the latest PCIe 4.0 M.2 drives for PCs let alone the crazy-quick integrated storage in the new Microsoft Xbox Series X and Sony PlayStation 5. But it's enough for reasonably nippy game loads.



SE800 1TB

ADATA **\$265**

Fast. Bomb proof. Affordable

1 NVMe inside? Yep. TLC NAND memory? Yes. IP rating for increased robustness including water proofing? Check. All for an attractive price? Confirmed. The ADATA SE800 Ultra FAST 1TB does have quite a bit going for it. It starts with that M.2 NVMe drive, bridged to a USB interface. In this case, it's a 10Gbps USB 3.2 Gen 2 interface rather than a 20Gbps USB 3.2 Gen 2x2 connection. But this drive is still claimed to be good for 1Gbps data transfers in both directions. Lest you have forgotten, that's around twice as fast as any SATA-based drives.

It's also nice to see that ADATA has equipped the SE800 with TLC rather than QLC NAND memory. All very nice, but what is really unusual is the SE800's IP68 rating. It means the drive is rated as impervious to dust ingress and can survive immersion in up to 1.5 metres of water for 30 minutes. That makes it unique among these SSDs and, what's more, given the competitive pricing you're getting that IP rating effectively for free.

PC PowerPlay VERDICT
→ Fast NVMe technology
→ Competitively priced
→ IP68 dust and water proofing

SPECS STORAGE: 1TB / **CONNECTIVITY:** USB 3.2 TYPE-C / **SEQUENTIAL READ:** 1GB/S / **DIMENSIONS:** 73 X 44 X 12 MM / **WARRANTY:** 3 YEARS

Black P50 Game Drive 1TB

WD **\$369**

The fastest USB Type-C gaming drive in town

2 If you're looking for fast USB-powered external storage for games, this is currently as good as it gets. At least, it is in theory. The WD Black P50 Game Drive, tested here in 1TB format but also available in 500GB and 2TB flavours, is a rare breed of USB Type-C external SSD. That's because it supports the very fastest USB 3.2 Gen 2x2 20Gbps interface. Which is why it's capable of read and write speeds up to 2,000MB/s. Of course, to achieve those speeds, you'll need a PC or console that supports USB 3.2 Gen 2x2. The former remains rare, the latter is entirely

non-existent. Still, the fact that the P50 Game Drive is essentially an NVMe M.2 in a ruggedised enclosure bodes well. What's more, WD has gone for TLC rather than slower QLC memory, which no doubt contributes to the excellent five-year warranty coverage. Our only reservation, out of the box, is that the rugged looks don't come with a formal IP rating for ingress protection, which is a bit of a pity.

PC PowerPlay VERDICT
→ USB 3.2 Gen 2x2 connectivity
→ Up to 2GB sequential performance
→ Few PCs support full performance

SPECS STORAGE: 1TB / **CONNECTIVITY:** USB 3.2 2X2 TYPE-C / **SEQUENTIAL READ:** 2 GB/S / **DIMENSIONS:** 118 X 62 X 14 MM / **WARRANTY:** 5 YEARS

GROUP TEST



CRUCIAL CLAIMS AROUND 1GBPS FOR SEQUENTIAL READS AND WRITES

3

X8 2TB

CRUCIAL **\$399**

A great-value NVMe-based external SSD

3 If you want it all, you're going to have to pay for it. So, sometimes it makes sense to compromise. Enter the Crucial X8 2TB USB Type-C SSD. It's not the absolute fastest external SSD on Earth. But it is quick. It's extremely capacious. It's built into a really solid-feeling metal case. And it's attractively priced.

Like the WD SSD, the Crucial X8 is essentially an M.2 NVMe drive behind a USB bridge, in this case a Crucial P1 with a hefty 2GB of DRAM. One difference is that where WD has used TLC NAND memory, Crucial has gone for cheaper, slower and less durable

QLC NAND. Another really critical contrast, of course, is USB 3.2 Gen 2 versus USB 3.2 Gen 2x2.

If that seems like an esoteric distinction, it means the WD supports 20Gbps data transfer, over twice the speed of this 10Gbps Crucial drive. Still, Crucial claims around 1Gbps for sequential reads and writes. So, the X8 is theoretically twice as fast as SATA-based drives. But it is still on the high side when it comes to the price.

PC PowerPlay VERDICT

- Strong NVMe performance
- 2GB DRAM cache
- Healthy 2TB of storage

SPECS STORAGE: 2TB / **CONNECTIVITY:** USB 3.2 TYPE-C / **SEQUENTIAL READ:** 1,050 MB/S / **DIMENSIONS:** 110 X 53 X 12 MM / **WARRANTY:** 3 YEARS

X6 2TB

CRUCIAL **\$389**

The toughest external hard drive on the market

4 There's a fine line between compelling and compromised when it comes to external USB Type-C SSDs. But for our money, the Crucial X6 falls on just the wrong side of that divide.

Even at normal prices, it's only around \$10 cheaper than its X8 sibling of the same 2TB capacity. The extra money doesn't feel like all that much to pay for literally double the sequential performance with the X8. The Crucial X6, you will therefore have guessed, is based on a bridged SATA interface where the X8 rocks NVMe. One of the knock-on implications of that architectural

difference is that the X8 has fully 2GB of DRAM cache where the X6 has none at all. The X6 also lacks a USB-C to USB-A cable, which seems particularly miserly.

That said, the X6 does support features like TRIM passthrough, which isn't always the case on cheaper USB drives and ensures that performance should be sustained in the longer term. It's also very compact for a 2TB drive, measuring just 6.9cm by 6.4cm by 1.1cm. It's tough, too.

PC PowerPlay VERDICT

- Lots of storage
- X8 a worthy upgrade
- No USB-A cable included

SPECS STORAGE: 2TB / **CONNECTIVITY:** USB 3.2 TYPE-C / **SEQUENTIAL READ:** 540 MB/S / **DIMENSIONS:** 69 X 64 X 11 MM / **WARRANTY:** 3 YEARS



WHAT TO LOOK FOR

Performance-wise, your choice is between a drive based on the SATA interface with a bridge to USB, or an NVMe interface, again behind a USB bridge. SATA-based USB Type-C drives top out at around 540MB/s peak performance, while the NVMe options up the ante to a maximum of 2GB/s. At least they do in theory. To achieve those peak speeds, you'd need a USB 3.2 Gen 2x2 port with 20Gbps capability. Interface specification isn't the only deciding factor when it comes to performance. Features like controller specification and the type and quality of NAND flash used are also important, though it's not always easy to identify the finer details. Many manufacturers are reluctant to quote full specifications. Drives with four-level QLC NAND memory, for instance, will tend to have worse underlying performance than those with triple-layer TLC memory.

Barracuda Fast SSD 1TB

SEAGATE \$279

A slightly underwhelming SATA-based SSD

5 This is not the fastest USB Type-C SSD you can buy for gaming. But then, it's far from the most expensive. Compared, say, to the WD Black P50 Game Drive, the branding of the Seagate Barracuda Fast SSD 1TB looks like a bit of stretch. Rated at 540MB/s for reads and 500MB/s for writes, it's simply nowhere near as quick. The Seagate Barracuda Fast SSD 1TB is essentially a SATA SSD behind a USB bridge, which means performance is limited to 6Gbps despite the drive's 10Gbps USB 3.2 Gen 2 interface. Arguably even more problematical is the existence of NVMe-based drives for similar money. The ADATA SE800 Ultra FAST 1TB, for instance, is around twice as quick for peak sequential performance. It's pity because the Seagate Barracuda Fast SSD looks slick with its sleek enclosure and LED status light. And Seagate's file syncing and backup software is handy. Unfortunately for Seagate, there's better performance to be had elsewhere.

PC PowerPlay VERDICT

→ Good software package

→ Slim chassis

→ Mediocre performance

SPECS STORAGE: 2TB / CONNECTIVITY: USB 3.2 TYPE-C / SEQUENTIAL READ: 540 MB/S / DIMENSIONS: 93 X 79 X 9 MM / WARRANTY: 3 YEARS

Portable SSD Touch 500GB

VAVA US\$89

Great security, but suboptimal for gaming

6 As a pure gaming drive, the Vava Portable SSD Touch is a little overqualified. The product of a crowd-funding exercise, its main claim to fame is to cram AES 256-bit encryption with fingerprint activation into a very small footprint. That makes high levels of security very convenient. But it also adds to the cost of the drive. It's unlikely most gamers will demand that level of security for their libraries. So, putting that added investment towards more storage space and raw performance as opposed to data protection will probably make more sense. That said, if you're looking for multi-purpose USB storage, the Vava has plenty going for it. That includes compact proportions and a robust build, thanks to an aluminium and zinc alloy frame. What it's not, is particularly speedy. That's largely down to the drives underlying SATA interface, which claims peak performance of 540MB/s read and 480MB/s write. In practice, Vava actually slightly outperforms those claimed sequential speeds.

PC PowerPlay VERDICT

→ Encryption and fingerprint security

→ Quality alloy chassis

→ Expensive for the performance

SPECS STORAGE: 2TB / CONNECTIVITY: USB 3.2 TYPE-C / SEQUENTIAL READ: 540 MB/S / DIMENSIONS: 100 X 30 X 9 MM / WARRANTY: 3 YEARS

Anda Seat Spider-Man Edition

GAMING CHAIR

Anda Seat Spider-Man Edition

Spider Chair, Spider Chair - perfect for your derrière.

PRICE \$819 ONLINE www.andaseat.com.au

If you're looking for the ultimate geeky gaming chair then this is it. Rival brands such as Secret Labs offer various special edition variants of their chairs that incorporate designs from content like *Cyberpunk 2077* or *Game Of Thrones*, and while they do this well, it doesn't hold a candle to the effort that has gone into the AndaSeat Marvel range.

The chair design is immediately identifiable as Spider-Man, and includes a lot of nice finishing touches, such as the 'eyes' located on the headrest, formed from solid textured plastic to emulate the appearance of Spider-Man's mask. The colors are bright and scratch-resistant, with accompanying memory foam pillows to support your head and back should you need them.

We found the Anda Seat Spider-Man Edition gaming chair to be plenty comfortable enough without these extra additions, but the constant theming through all the additional accessories should be applauded. Every meeting or video call was met with a compliment on

the styling of the chair, so this is sure to be a hit with fans of the Marvel franchise.

The chair also comes with a circular floor mat to protect your flooring or carpets from the heft of the chair. The floor mat is the only bit of this collection we feel doesn't deliver a premium feel, as it's stiff and easy to get caught under the wheels. Visually speaking though, it works to complete the Spider-Man aesthetic and certainly does its job to protect your flooring (we spilled water onto it during our review process and no liquid leaked through to the carpet underneath).

The armrests are 4D, meaning that you can adjust their height, position, and rotation. This level of customisation is intended to adapt the chair to its environment and aid in preventing wrist discomfort.

The main body of the Anda Seat Spider-Man Edition is a high density molded foam that promises to retain its shape for years to come. The racing seat style of the chair isn't medically ergonomic, but we found it to be extremely comfortable for lengthy periods of sitting and didn't exacerbate any joint or back issues.



The chair is coated with hard-wearing PVC leather which makes it resistant to scratching and spillage, and as such would make this a great option for kids.

The reviewer measures in at 5ft 6-inches, and found the height of the pillow to be completely unusable, but this didn't ruin the overall experience too much, as we found the pillow wasn't necessary when trying to get comfortable in the chair.

The chair offers plenty of room to sit with legs crossed or extended, and the additional memory foam lumbar pillow is a great addition for anyone who requires a little support. Overall, sitting in the Anda Seat Spider-Man Edition gaming chair for lengthy periods is extremely comfortable, even for a shorter individual who can't use the additional extras.

JESS WEATHERBED

PC PowerPlay

VERDICT

The Anda Seat Spider-Man Edition is an incredibly constructed gaming chair with a unique look that's perfect for any Marvel fan (providing you're tall).

89



MAGIC LENSES

Asus ROG Bezel Free Kit

Cast an invisibility spell on your bezels.

PRICE \$240 ONLINE www.rog.asus.com

If you exist in the niche that is triple-screen gaming, you most certainly have that niggling itch inside your brain that bezels suck. And suck they do! Buying monitors with narrow bezels only helps a little bit – they're still bloody there – two black immersion-busting lines that you can never de-focus.

But, this! It's a legit solution with benefits that outweigh the relatively insignificant drawbacks. In the box are two 40cm long plastic lenses (so, max monitor size is 27-inch) and a pair of nice spring-loaded brackets to hold the top and bottom in place on your screens. The lenses have two elements, one on each side of a fine line down the middle where they meet. Installation is a one minute task, plus a bit of time sitting in your natural gaming position and aligning the centre-line with the area where your bezels meet.

The optical science is simple, the light from the screen behind each lens is refracted towards the middle, and the lenses are angled in a slight V-shape, so the effect is that they stretch the game image inward

and over the top of the bezels, making them, for all intents and purposes, invisible.

It works! The bezels are completely masked, creating a lovely sense of super-super-widescreen wraparound gaming. It's truly transformative in the sense that the objective is to get rid of the black bezels. But we must not expect miracles, and there are a couple of compromises. First, the lenses themselves are not invisible – the plastic used is high-tech good stuff with good optical accuracy, but they 'only' let 90% of the light through – so you'll always have a faint reminder they are there.

More noticeable is the slight distortion from the refraction. It's very minor, though will depend on your bezel thickness – the thinner they are the less this effect is visible. Where you notice it most is in the top and bottom of the screen. As any triple-screen gamer knows, you simply cannot have perfect alignment (with or without this kit) through the full vertical length of the screens. That's because your eye level should be at the centre point of the screens for any multi-monitor setup, and the alignment will thus

always fall away the further up or down you look. Unavoidable, that. The bezel kit magnifies that just a little bit. It's not a big deal at all if you are a sim racer, because you so rarely look at the top or bottom area of that part of the screen. Flight sims... maybe a little more noticeable, but it's not a deal-breaker. Any text directly under the top or bottom is still readable, though, and things like track maps are perfectly fine.

The only other 'negative' is the price. Why, you will wonder, are two strips of plastic almost \$250? Optics, science, quality materials and R&D, my friends. One could calculate, say, the price difference between 3x monitors and this kit, compared to a 49-inch Samsung screen – but you just plain get more size and curvature with a triple setup.

BEN MANSILL

PC PowerPlay

VERDICT

This is a good, though not essential, product. Sim racers and flight simmers tend to spend many weekly hours doing their thing, and the benefits this brings are a huge quality of life improvement.

85

GROUP TEST

GAMING CPUs

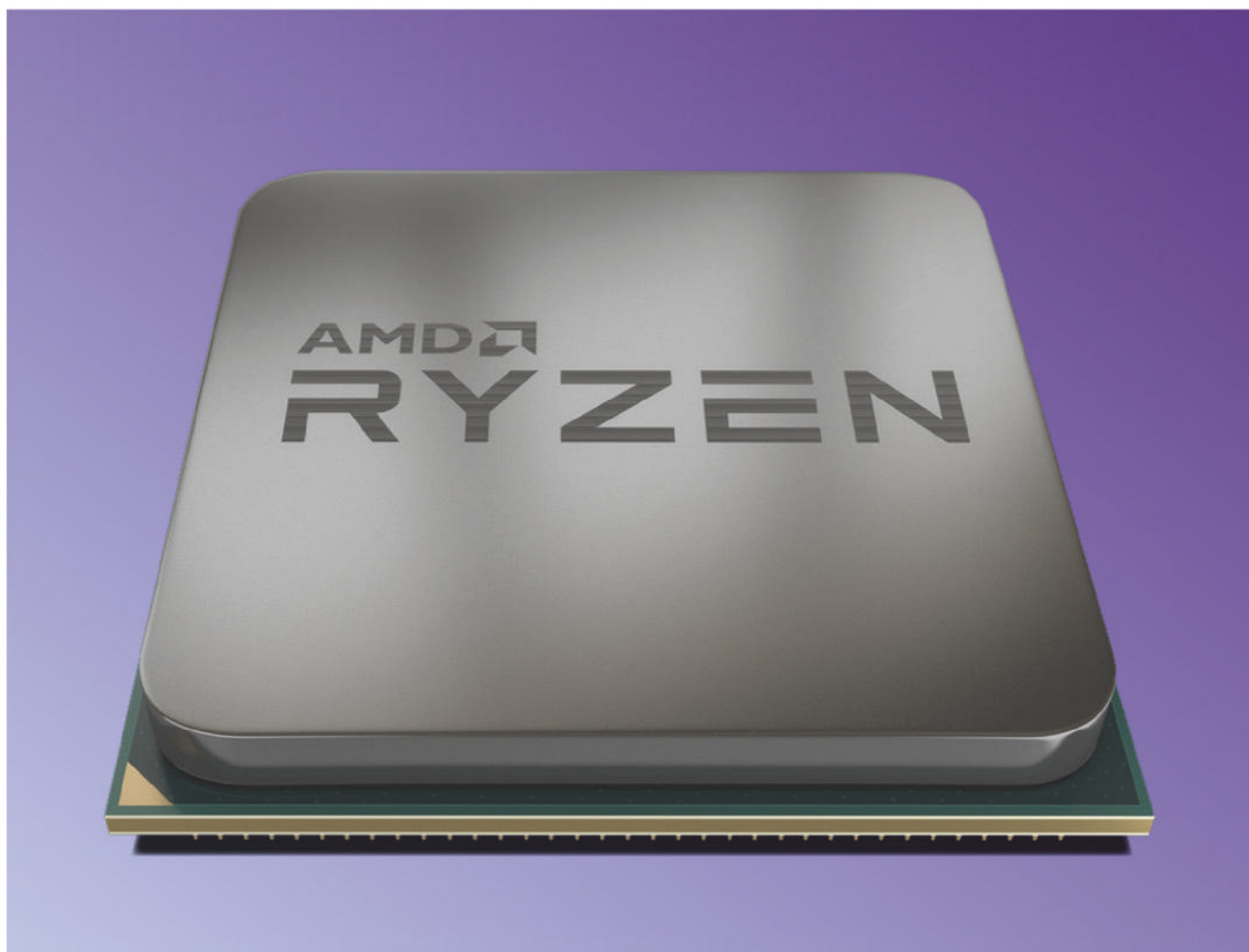
Fire up your rig with the best CPU for gaming. *By Alan Dexter*

Traditional wisdom dictates that if you want the best gaming performance there is really only one option: Intel. That thinking is now outdated. With the release of AMD's Zen 3 architecture and its Ryzen 5000 family of chips, there is now nothing between Intel's finest and

AMD's latest. Some games may favour one over the other, but we're talking a few frames here and there on average. Intel has lost its gaming crown.

This is good news for us gamers, as it means there is now genuine competition between the two chipmakers, and that has already lead to Intel's prices tumbling.





Ryzen 9 5900X

AMD \$799

The best all-round CPU for gaming and streaming

1 AMD's new Zen 3 architecture boasts a sweet 19 percent IPC improvement over its predecessors. For us gamers that means AMD can now stand toe to toe with Intel when it comes to gaming. Honestly, there's so little between these two now that anyone claiming otherwise is simply delusional.

Whatever resolution you're gaming at, this processor can handle it, and keep your graphics card of choice fed with lots of juicy frames. The fact that this is a 12-core, 24-thread monster means that it can cope with anything else you throw at it as

well. So if you have dreams of 3D rendering, video editing, streaming your gaming, or any other serious tasks, you'll know that you have the raw grunt to handle it. The fact that it won't hold you back when gaming just makes it even sweeter.

The only real downside to this is how much it costs, but you absolutely get what you pay for, and this is a phenomenal chip for gaming and anything else you might want to do.

PC PowerPlay VERDICT

- The best CPU for gaming
- Awesome performance throughout
- Fast and efficient architecture

SPECS CORES: 12 / THREADS: 24 / BASE CLOCK: 3.7GHZ / BOOST CLOCK: 4.8GHZ / OVERCLOCKING: YES / L3 CACHE: 64MB / TDP: 105W / PCIE 4.0 LANES: 20

Ryzen 5 5600X

AMD \$549

The best CPU for gaming on a reasonable budget

2 Everything that's great about the 5900X rings true for this more affordable Zen 3 chip – you'll hit the same frame rates in games as you will with our number one pick. Top tier performance from the most affordable Zen 3 CPU? We'll say yes to that every single day.

It does have half the core count of the 5900X, rolling in as it does with 6-cores and 12-threads, but this is only an issue with more serious workloads, and for more reasonable stuff this is more than sufficient. You could argue that gaming could go beyond the 12-threads we have here, but there's no evidence of that yet,

and that's despite the fact that the next-gen consoles are rocking 8-cores and 16-threads.

The Ryzen 5 5600X also bucks the trend of the Ryzen 5000 family by shipping with a Wraith Stealth cooler, so you don't have to drop extra money on a third-party chiller. You don't need to, but if you do, you'll hit higher clocks for longer and also open up the wonderful world of overclocking, which could make it worth your while.

PC PowerPlay VERDICT

- Awesome gaming performance
- Great value for money
- Wraith Stealth included

SPECS CORES: 6 / THREADS: 12 / BASE CLOCK: 3.7GHZ / BOOST CLOCK: 4.6GHZ / OVERCLOCKING: YES / L3 CACHE: 32MB / TDP: 65W / PCIE 4.0 LANES: 20



Core i7 10700K

INTEL \$479

Intel's best gaming CPU is a great value proposition

3 The Core i7 10700K is Intel's best 10th gen gaming CPU. It trades blows with AMD's new Ryzen 7 5800X, which is another 8-core, 16-thread processor of the 7nm Zen 3 variety, but represents better value for money.

It's not as powerful in serious applications, but in terms of pure gaming, there's really not a lot in it. This is basically \$70 cheaper than AMD's similarly capable chip, and that's money that could be better spent elsewhere.

Where Intel does have more of an edge is in the overclocking stakes. AMD processors don't have a lot of overhead in them,

while you can easily push the 10700K over 5GHz on all cores, and without melting through the heat spreader either.

AMD does bring PCIe 4.0 support to the party, though it's worth noting that despite Nvidia building it into the Ampere RTX 30-series cards it doesn't have a whole lot of impact in terms of gaming performance just yet. What it will do is allow you to use the highest performing PCIe 4.0 SSDs, which is neat.

PC PowerPlay VERDICT

- Great stock performance
- Full HyperThreading
- Solid overclocking

SPECS CORES: 8 / THREADS: 16 / BASE CLOCK: 3.8GHZ / TURBO CLOCK: 5.1GHZ / OVERCLOCKING: YES / L3 CACHE: 16MB / TDP: 95W / PCIe 3.0 LANES: 16

Ryzen 7 5800X

AMD \$719

A great mid-range chip for serious work and gaming

4 In the alternate universe where Intel doesn't exist this is an incredible chip that would easily make it into our top three recommendations. It's great for gaming, producing the same figures that can be seen for the 5900X and 5600X, but it also appears to hit the sweet spot in configuration terms, with its eight cores and sixteen threads surely seeing it right for the future, because that is what the Xbox Series X and PlayStation 5 consoles are rocking.

Unfortunately for AMD, Intel does exist, and the blue company's Core i7 10700K matches this in plenty of the

more important metrics but has this chip beat in one major way – value for money. This is faster in serious tasks, and if that's what you've got an eye on, then buy this and don't give it a second thought. But if you're mainly looking at gaming, Intel does pretty much the same but costs less. And that's hard for AMD to get away from.

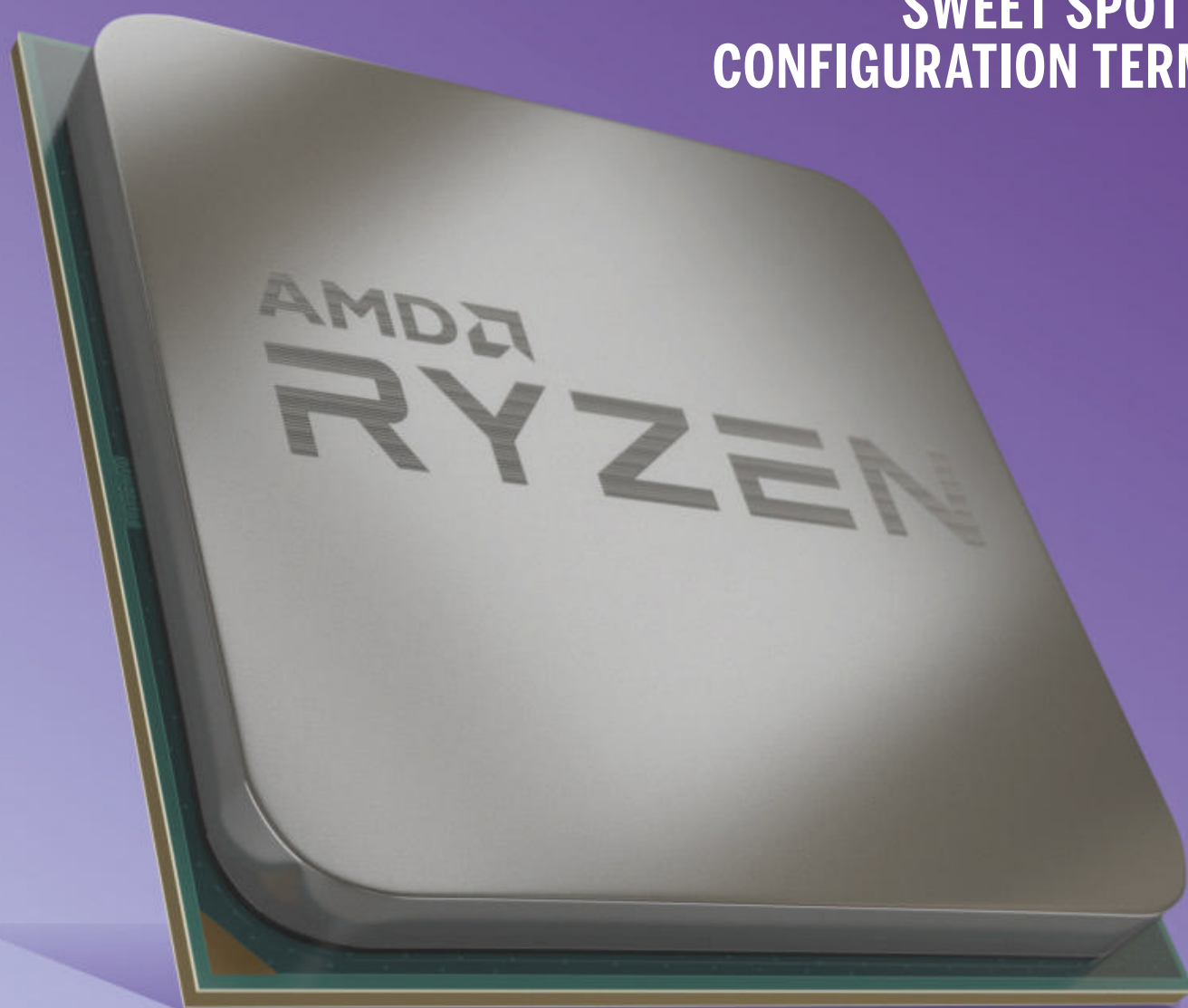
This is still a great Zen 3 chip either way and includes support for PCIe 4.0 for next-gen SSDs.

PC PowerPlay VERDICT

- The same great Zen 3 architecture
- Awesome gaming performance
- PCIe 4.0 support

SPECS CORES: 8 / THREADS: 16 / BASE CLOCK: 3.8GHZ / BOOST CLOCK: 4.7GHZ / OVERCLOCKING: YES / L3 CACHE: 32MB / TDP: 105W / PCIe 4.0 LANES: 20

APPEARS TO HIT THE SWEET SPOT IN CONFIGURATION TERMS



AMD'S ZEN 3

You'd be forgiven for thinking Zen 3 is a simple evolution of Zen 2, but it's actually a complete redesign. A redesign that fuels the 19 percent IPC improvement over Zen 2, which isn't a boost that comes easily – you need only look at Intel's modest improvements over its last few generations for proof of this. And it's that 19 percent boost that is responsible for AMD finally managing to not only catch up with Intel but overtake it in gaming.

For Zen 3, AMD has moved to an eight-core chiplet design as opposed to the previous four-core model, which improves communication between the cores and the cache. Now all eight cores can access 32MB of L3 cache directly, and don't need to go through the I/O die to do so. There are other improvements as well, but this one shift is key to improved throughput for videogames.

Core i9 10900K

INTEL \$729

The Comet Lake flagship is still a powerful option

5 Intel's top gaming chip lost a lot of what made it special with the release of Zen 3. When the 10900K was first unleashed it came with the reassurance that it was the 'world's fastest gaming processor', but that's not a claim it can really hold on to anymore, with plenty of games handing wins to AMD's Ryzen 5900X. It's still a cracking game chip, don't get us wrong, but it traded on being the very best, and once that went, it lost its shine.

It's still overkill for the vast majority of cases, apart from possibly at the very, very high-end, and for serious

workloads – although there AMD chips make more sense. So, you probably don't need the 10900K, but if you do build a machine around it, you know it won't be this chip that's holding you back.

The Core i9 10900K is the first time Intel has managed to squeeze ten processing cores into its mainstream line up, and given it's capable of hitting 5.3GHz (however briefly), it represents an impressive feat of engineering if nothing else.

PC PowerPlay VERDICT

- Fastest gaming performance
- Overclocking potential
- Top performance needs lots of power

SPECS CORES: 10 / THREADS: 20 / BASE CLOCK: 3.7GHZ / TURBO CLOCK: 5.3GHZ / OVERCLOCKING: YES / L3 CACHE: 20MB / TDP: 95W / PCIE 3.0 LANES: 16

Core i5 10400F

INTEL \$219

A great budget-friendly option for Intel builds

6 The Core i5 10400F is an exciting option. It's slightly faster than the previous-gen Core i5 9400 but that F-suffix means it ditches the Intel integrated graphics completely. That's not a problem for gamers unless you want to use QuickSync, although Nvidia's NVENC is arguably better anyway. It's an excellent budget choice that doesn't cost much more than a Core i3 processor.

There are other compromises, like the locked multiplier – so no overclocking. But that means you can save money and grab a cheaper H470 motherboard. At least you get a cooler in the box,

something we'd like to see as an option with every CPU. Most boards will run the 10400F at 3.9GHz as well, so don't fret about the low base clock.

While the i5 10400F may not be as fast as other CPUs in multithreaded tests, in our gaming suite, it's tied with AMD's last-gen 3900X. If you're gaming on a tight budget then this is hard to beat right now – it's somewhat ironic that Intel has become the budget choice.

PC PowerPlay VERDICT

- Affordable mid-range performance
- Cooler included in the box
- Multiplier locked

SPECS CORES: 6 / THREADS: 12 / BASE CLOCK: 2.9GHZ / TURBO CLOCK: 4.3GHZ / OVERCLOCKING: NO / L3 CACHE: 12MB / TDP: 65W / PCIE 3.0 LANES: 16

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Hagionaut

GAMING'S LINEAGES EXPLORED

Now that's dynamic
lightsaber combat.

STAR WARS: KNIGHTS OF THE OLD REPUBLIC

Revisiting the RPG in a time when Star Wars is everywhere. *By Andy Kelly*

Like many people, I recently finished season 2 of *The Mandalorian* and was left with a hunger for more Star Wars in any form. I rewatched the original trilogy, read a selection of graphic novels and books (including Steve Perry's brilliant *Shadows of the Empire*), and – and best of all – decided to replay BioWare's classic Star Wars RPG *Knights of the Old Republic*.

The last time I played *KOTOR* was around the time of its UK release in the autumn of 2003, and it was the perfect antidote to the disappointing

prequel trilogy. George Lucas was two films deep by this point. *Attack of the Clones* was released the year before and I was not a fan, to put it mildly. But here was this videogame, set 4,000 years before Luke Skywalker, Darth Vader, and the Death Star, reminding me of why I loved Star Wars in the first place. A rare, thrilling chance to explore the ancient, unseen history of my favourite fictional universe.

Today, after years spent drifting in the pop culture Dune Sea, Star Wars is in a very different place. A whole new film trilogy has been and gone, along with several spin-offs. The series successfully made the jump to

the small screen, including the aforementioned *Mandalorian*, which is the most I've enjoyed a Star Wars thing in ages. And owner Disney just recently announced a galaxy's worth of new movies, books, and TV shows. Honestly, it's a bit much.

The Force Awakens landed so perfectly because it had been years since the last good Star Wars film. *Rise of Skywalker*, by most accounts, did not – not only because it was a cowardly retcon of *The Last Jedi* and ultimately just a bad, confused film, but because people were sick of Star Wars, at least in its traditional form. I went to a midnight screening of *Awakens*, and I didn't even bother seeing *Rise* on the big screen. They lost me. So as much as I enjoyed *The Mandalorian*, which reignited my passion for the series in a big way, I wondered if by installing *KOTOR* I was at risk of reaching Star Wars overload once again.

NEED TO KNOW

RELEASED
2003

DEVELOPER
BioWare

PUBLISHER
LucasArts

LINK
bit.ly/starwarsknights



Rocking the double lightsaber
4,000 years before Maul.



Technically most of this isn't
canon these days.



You'd be furious too if you had
to live on Tatooine.

But what sets BioWare's game apart, even after all this time, is where it sits on the timeline. Most of the Star Wars stories being told today revolve around the Skywalker clan and other events from those nine films. Even *The Mandalorian*, which did a good job of carving its own path through this galaxy, succumbed to the temptation – particularly in the latter half of season 2. But by throwing you back to the days of the Old Republic, *KOTOR* gives you a fresh perspective on this universe, letting you witness its rich and storied history first-hand.

GOLDEN AGE

When the game begins, the Republic is at war with the Sith, led by the evil Darth Malak. The Jedi have been left scattered and vulnerable, with many turning to the Dark Side and joining Malak's growing army. And that's where you come in, a hero with a mysterious past who joins the dwindling Jedi Order and embarks on a quest to stop Malak and his powerful Sith fleet. Those are the broad strokes, but things get a lot more complicated – especially when the protagonist learns, in a very Star

Wars plot twist, a shocking truth about their shadowy past.

Of course, there's the question of canon. It's a great story, but did it 'really' happen? Another big change that occurred between *KOTOR*'s release and now is that the events of the game may no longer be part of the main Star Wars continuity. When Disney snapped up Star Wars it categorised this game, and countless other Star Wars spin-offs from the so-called expanded universe, as 'Legends'. That said, some things BioWare created for *KOTOR* – the planet Taris, card game pazaak, and the Selkath race, to name just a few – have appeared in projects that are considered canon. So the whole situation is a little unclear. There's also a rumour that screenwriter Laeta Kalogridis is working on a *KOTOR* movie for Disney, so maybe this story, if the film sticks closely to it, will be canon after all.

Really, though, it doesn't matter. Just because the classic short story anthology *Tales of the Bounty Hunters* is as non-canon as it gets doesn't mean it isn't still a fun collection of Star Wars yarns. And even though we now know it was



PARTY ON

Best to worst companions

- 1 **CARTH ONASI**
Soldier, hero, nice guy, handy with a blaster.
- 2 **HK-47**
Assassin droid who despises all organic life.
- 3 **BASTILA SHAN**
Powerful Jedi, knows her way around the Force.
- 4 **MISSION VAO**
Tough-willed teenage Twi'lek with an attitude.
- 5 **CANDEROUS ORDO**
Cranky Mandalorian with a very large gun.
- 6 **JOLEE BINDO**
Wry old Jedi who straddles the Dark and the Light.
- 7 **ZAALBAR**
Likeable Wookiee, but never has much to say.
- 8 **JUHANI**
Kinda boring Jedi you can save from the Dark Side.
- 9 **T3-M4**
Astromech droid with no actual personality.



Mandalorians weren't always as stylish as Pedro Pascal.



The Ebon Hawk is very much a proto-Normandy.



About to drop the freshest album this side of the Rim.

» Rogue One's Jyn Erso, not Kyle Katarn, who stole the plans for the first Death Star from the Empire, *Dark Forces* remains a superb Star Wars game. Some fictional universes benefit from a consistent, traceable timeline, but Star Wars is like a myth, a fairytale, and that makes this less important. Who really knows what happened 4,000 years ago? *Knights of the Old Republic* is just one possible version of those events.

However, despite the chronological gulf, *KOTOR* still has plenty to scratch any Star Wars itch you might develop. If anything, BioWare made its take on the universe a little *too* similar to classic Star Wars – especially considering the amount of time that's supposed to have passed between this game and the original trilogy. But I'll let it slide, because the established language of Star Wars – blasters, speeders, astromech droids, cocky smugglers, pious Jedi, and so on – lays a familiar foundation to tell this new story on. BioWare could have created something completely different and alien, and I'm sure they would have done a great job of it, but it might not have felt very Star Wars.

And even though some of the lore has since been contradicted by Jon Favreau and Dave Filioni's TV show, a heavy Mandalorian presence makes *KOTOR* particularly enjoyable if you've just finished watching the adventures of Din Djarin and his tiny green Force-sensitive friend. At this point in time the Mandalorians have just lost a war, scattering their clans around the galaxy. You run into a few of them, including a gladiator named Bendak Starkiller (no relation to the hero of *The Force Unleashed*), and Sherruk, the powerful leader of a

gang of raiders who loves nothing more than killing Jedi and collecting their lightsabers as trophies.

You also party up with a Mandalorian: a grouchy war veteran named Canderous Ordo, whose Dark Side alignment makes him an ideal companion for anyone role-playing as such. And if you're not, then he always has a sarcastic remark ready when you follow the Jedi Code and deny a reward for doing a good deed. Turning down credits gets him particularly hot and bothered. I also really like BioWare's take on what

OUTER WORLDS *A selection of the planets you visit in KOTOR*



DANTOOINE

A quiet, remote world where the protagonist learns the ways of the Jedi, and tests their new lightsaber out on a group of Mandalorian raiders.



TARIS

A planet-sized metropolis. The upper city is safe, relatively speaking, but the dangerous lower levels are ruled by crime-loving swoop-bike gangs.



TATOOINE

A barren desert world you may have heard of before. When the protagonist arrives, the Czerka Corporation has laid claim to the planet.



MANAAN

A vast ocean-covered planet. The protagonist visits its capital where they uncover an evil Sith plot to brainwash children who are Force sensitive.



Why do Star Wars games always make you fight so many animals?

KOTOR IS SET IN THE OUTER RIM – THE WILD, LAWLESS PART OF THE GALAXY

Mandalorian armour might have looked like thousands of years ago. It's actually quite different, but the T-shaped visor is a nice visual link to the Beskar gear that we're used to seeing being worn by the likes of Boba Fett and Bo-Katan.

OUTER SPACE

And like *The Mandalorian*, most of *KOTOR* is set in the Outer Rim – the wild, remote, often lawless part of the galaxy where all the best Star Wars stories take place. Taris, the first planet you visit, is like a rougher Outer Rim take on Coruscant – a planet-sized metropolis plagued by crime and ruled by ruthless swoop bike gangs. You also get to visit the quiet agrarian planet of Dantooine, which Princess Leia mentions briefly in *A New Hope*, and find it besieged by



Mandalorian raiders looking for something to do now that they don't have a war to fight. And, of course, there's a stop at Tatooine, the most significant planet in the entire Star Wars mythology, whose desert surface is being strip-mined by the Czerka megacorporation.

But is it still fun to play? *KOTOR* regularly makes lists of the best Star Wars games, but I often wondered how much of that was fuelled by nostalgia. So I was glad to discover that, while rough around the edges, it remains a great RPG. The environments are nicely varied, with compelling self-contained stories relevant to each world's politics and history. The personal journey of the hero, and how they handle that big revelation, is well written and emotionally impactful. The companions are memorable; both in their interactions and how they respond to your decisions. It's still clunky, with a messy UI and stiff animation, but the challenging combat, reactive quests and strong writing absolutely hold up.

It's also interesting, as a *Mass Effect* fan, to see the genesis of that series here. The first *Mass Effect* is

basically a refinement of *KOTOR* minus the Star Wars stuff. Flying between planets, chatting with companions aboard the Ebon Hawk and facing tough moral choices in quests, I can't help but think of Commander Shepard and the gang. *KOTOR* is BioWare's first really successful transition from 2D games like *Baldur's Gate* to three dimensions. Although interestingly, the combat is still rooted in *Dungeons & Dragons*, borrowing its d20 system – although the developer does hide this here more than it does in its Infinity Engine games.

And the good news is, it runs fine on modern PCs. To play in higher resolutions you'll need to do some modding, so check out the game's entry on the PC Gaming Wiki for instructions. It's worth reinstalling, even if you're burned out on Star Wars. *KOTOR* is detached enough to still feel like a fresh take on the material – which is a weird thing to say about a game that came out when George W Bush was president. But with Disney still sticking closely to that familiar pool of characters and events, *KOTOR*'s distance from them is worth celebrating even more. ■

HITMAN'S STAGGERING VARIETY OF OBJECTS TO HIT PEOPLE WITH

Household items have so much violent potential. *By James Davenport*



RIGHT: A kettlebell seeks its target.



Here are just a few of the objects you can seriously harm someone with in the recent *Hitman* games: a blueberry muffin, a cannonball, a cheeseburger, a feather duster, a frying pan, a bone (the meat still on), a snow globe, driftwood, a cowboy bust, a bag of sugar, a wet floor notice, an android arm, a dead fish, a didgeridoo, a Maori paddle, and the classic, everlasting brick. Remember, we're just scratching the surface of smack-a-dude tech. When you get to expired-can-of-spaghetti levels of blunt force trauma, you'll know you're playing *Hitman* for real.

I've yet to see what *Hitman 3* adds to the mix, but in catching up on the *Hitman 2* DLC levels before wrapping the trilogy, I fell into an inescapable vortex of desire, the desire to bash people over the head with everything I possibly could. I've gotta smash 'em all, and there are so many good things to smash 'em with.

But let's examine the act of bashing someone over the head with A Thing first. IO figured out how to make it feel good and precise without indulging in wild knockout animations or burdening the player with the need for a perfect setup and execution. When you move to knock someone out with a blunt object, Agent 47 either bops them over the head if they're close, or hits them from across the room with the aim and velocity of an MLB pitcher.

When the rotating aiming reticle pops up and locks onto an enemy's head, so long as the cursor is within a couple feet of their skull, and the arc projects the object's journey – that's the moment *Hitman* hands you a 20 dollar bill and says get yourself a treat, have some fun, I'm just a damn

NEED TO KNOW

RELEASED
November 2018

EXPECT TO PAY
\$80 as part of a Steam bundle

OUR REVIEW
84%

LINK
hitman.com

DREAM OBJECTS

Stuff I'd love to maim with

GAMING KEYBOARD

It leaves Alt+F4 imprinted on their forehead.

JAR OF PENNIES

River City Ransom vibes.

AUTOPSY REPORT

The clipboard is super, super heavy.

NOVELTY HULK HANDS

Just imagine 47 saying "Hulk smash".

HITMAN ACTION FIGURE

It's not a toy, dammit!

GAMING PC

Talk about a hard reset.

THEIR OWN FIST

Stop hitting yourself!

A 3D PRINTER

When you need a hammer five hours from now.

AN OSMIUM PELLET

Heavy metal, man.

videogame. Agent 47 wouldn't miss, so neither will you. He never smiles either, but the arc every object travels on from 47's abyssal pockets to some dope's dome forms a big grin from some angle. I mean, here's an austere meat machine born to kill pulling a ceramic cowboy bust, a banana, and a pool ball from his pockets and knocking out three trained mercenaries in under two seconds. Watch them as they fall, folding over like parade balloons. It's pure videogame slapstick.

OBJECTIFICATION

I'm always hoarding objects, walking around with eight gold bars, three wrenches, a couple muffins, and whatever else Agent Roomba hoovers up just in case I need to put a room to sleep with some explosive juggling. I like to imagine Agent 47, total confidence and assertion in his perfectly measured gait, walking around a secret island resort for rich criminals with bananas, ancient burial knives, and Fabergé eggs

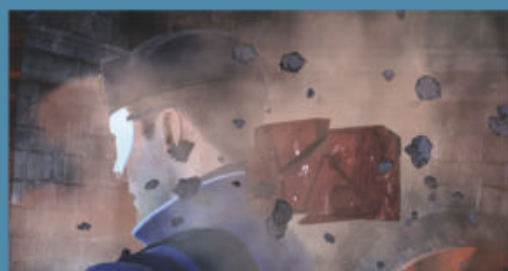
spilling out of his cargo shorts. *Well hello, Agent 47. Is that an auto shop in your pants or are you just happy to see me?* There's no avoiding the physical comedy meta either: your most essential tools often double as melee weapons. They're great panic buttons, especially if someone catches you loosening a valve with one. But I look at wrenches differently now, and that's a problem. I perceive all plumbers as threats.

Even if most of *Hitman*'s blunt objects function similarly, they each carry immense thematic weight. There's not a single target that can avoid my desire to knock them out with something perfectly ironic, which has evolved into its own list of personal, vindictive objectives for me. Sometimes you'll get a nod in the massive list of challenges associated with each mission, but I love how I'm intrinsically compelled to bash my targets over the head with something thematically appropriate, even without the guiding hand of an overt mission objective. I took out Milton-Fitzpatrick Bank CEO Athena Savalas with a gold bar, of course. Druglord Rico Delgado went down

I LOOK AT WRENCHES DIFFERENTLY NOW. I PERCEIVE ALL PLUMBERS AS THREATS

with a cocaine brick. Each implement must be joined with the head of a given monster with the utmost care and consideration (for how much it's going to make you laugh).

Hitman's head-bashing mechanics aren't complex. They're nothing new in videogames, violent verbs from the earliest days of PC gaming. But they're a perfect example of how visual and thematic variety can give the impression of many possibilities, even if the only possibilities are to concuss professional bodyguards and elite criminals. I can't wait to see what everyday objects I can take out the worst people alive with when I get started with *Hitman 3*. ■



RIGHT: The face of a man that knows a fish is coming.



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